

## Socha, Julianne

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**From:** ashley.ward@epa.ohio.gov  
**Sent:** Friday, February 24, 2017 9:48 AM  
**To:** Socha, Julianne  
**Subject:** Ohio CAFO records  
**Attachments:** RE: Follow-up Complaint re: **Exemption 6** Land Company; RE: Follow-up Complaint re: **Exemption 6** Land Company

Good morning and happy Friday!

I didn't forget about you! I'm attaching the records that we sent to **Exemption 6**. If these records don't get you everything you need, let me know and we can talk about sending you more or having you come in for a file review.

Thanks,  
Ashley Ward  
NPDES Supervisor  
Division of Surface Water  
(614) 644-4852

Socha, Julianne

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**From:** richard.bouder@epa.ohio.gov  
**Sent:** Wednesday, December 07, 2016 9:57 AM  
**To:** [Exemption 6]  
**Subject:** RE: Follow-up Complaint re: [Exemption 6] Land Company  
**Attachments:** [Exemption 6] 1.pdf

Hi [Exemption 6]

My apologies on the delay in getting back to you, attached are documents I was provided by the Division of Surface Water here in Central Office in response to your 10/17 records request. Due to the size of the files I will send the remaining file in a second email.

Please don't hesitate to contact me should you need any additional information.

Thank you!  
Rich

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**From:** Bouder, Richard  
**Sent:** Wednesday, November 02, 2016 9:13 AM  
**To:** [Exemption 6] [Exemption 6]  
**Subject:** RE: Follow-up Complaint re: [Exemption 6] Land Company

No problem [Exemption 6]! Yes, I did receive your request from 10/17 and am waiting for a reply from the Division of Surface Water. I'll contact you as soon as I receive a response back.

Thanks!  
Rich

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**From:** [Exemption 6] [Exemption 6]  
**Sent:** Tuesday, November 01, 2016 11:25 PM  
**To:** Bouder, Richard <[richard.bouder@epa.ohio.gov](mailto:richard.bouder@epa.ohio.gov)>  
**Subject:** RE: Follow-up Complaint re: [Exemption 6] Land Company

Hi Richard,

Thanks so much for your reply. I do have another public records request pending from October 17<sup>th</sup>. Please let me know if it wasn't forwarded to you.

I appreciate all your help!

[Exemption 6]

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**From:** [richard.bouder@epa.ohio.gov](mailto:richard.bouder@epa.ohio.gov) [<mailto:richard.bouder@epa.ohio.gov>]  
**Sent:** Monday, October 31, 2016 11:43 AM  
**To:** [darla.peelle@epa.ohio.gov](mailto:darla.peelle@epa.ohio.gov); [Exemption 6]  
**Cc:** [Rick.Wilson@epa.ohio.gov](mailto:Rick.Wilson@epa.ohio.gov); [web.requests@epa.ohio.gov](mailto:web.requests@epa.ohio.gov)  
**Subject:** RE: Follow-up Complaint re: [Exemption 6] Land Company



Good morning [Exemption 6],

I checked with the Division of Surface Water and we do not have any records in response to your request below for up-to-date soil sample/manure analyses documents.

Please let me know if you need any additional information.

Thank you,

Richard Boudier  
Public Records Manager  
Ohio Environmental Protection Agency  
Office of the Director  
Lazarus Government Center  
P.O. Box 1049  
Columbus, Ohio 43216-1049  
(614) 644-2782  
[richard.boudier@epa.ohio.gov](mailto:richard.boudier@epa.ohio.gov)

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**From:** Peelle, Darla  
**Sent:** Friday, October 28, 2016 9:50 AM  
**To:** [Exemption 6]  
**Cc:** Wilson, Rick <[Rick.Wilson@epa.ohio.gov](mailto:Rick.Wilson@epa.ohio.gov)>; EPA Web Requests <[web.requests@epa.ohio.gov](mailto:web.requests@epa.ohio.gov)>; Tebbe, Patricia <[patricia.tebbe@epa.ohio.gov](mailto:patricia.tebbe@epa.ohio.gov)>; Boudier, Richard <[richard.boudier@epa.ohio.gov](mailto:richard.boudier@epa.ohio.gov)>  
**Subject:** RE: Follow-up Complaint re: [Exemption 6] Land Company  
**Importance:** High

Good morning, [Exemption 6]—

Thank you for letting us know about [Exemption 6] experience. I tried to reach him this morning, but my call went to voicemail, so I left a message that included an apology and my contact information. I'm sorry [Exemption 6] felt his concerns were dismissed. I don't know who he may have spoken with, but to the best of my knowledge it wasn't the Public Interest Center where I work, and Pat Tebbe also let me know that she didn't receive a call from him.

I have forwarded [Exemption 6] complaint to Rick Wilson in the Division of Surface Water in Ohio EPA's Central Office, here in Columbus. As you know, most CAFO issues are regulated by the Ohio Department of Agriculture, but Rick is still Ohio EPA's contact for those concerns under our authority.

Please keep in mind that I am always available as Ohio EPA's point of contact for northwest Ohio and I'm happy to provide assistance at any time. I'll be sure to let [Exemption 6] know this when he returns my call. If I can provide further assistance, please don't hesitate to contact me directly.

Best regards,

*Darla*

**Darla L. Peelle**  
Ohio EPA | Public Involvement Coordinator  
Northwest and Southwest District Offices  
Phone: (614) 644-2160  
Fax: (614) 644-3727

[www.epa.ohio.gov](http://www.epa.ohio.gov)



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**From:** [REDACTED] [REDACTED]  
**Sent:** Thursday, October 27, 2016 8:44 PM  
**To:** EPA Web Requests <[web.requests@epa.ohio.gov](mailto:web.requests@epa.ohio.gov)>  
**Cc:** Tebbe, Patricia <[patricia.tebbe@epa.ohio.gov](mailto:patricia.tebbe@epa.ohio.gov)>; 'Batey, Benjamin' <[BBatey@co.wood.oh.us](mailto:BBatey@co.wood.oh.us)>  
**Subject:** Follow-up Complaint re: [REDACTED] Land Company

To Whom It May Concern:

I just received a call from [REDACTED], [REDACTED], Weston, OH – [REDACTED]. He said he tried to submit a complaint and/or a request an investigation yesterday into what he believed to be unlawful land applications of manure by the [REDACTED] Land Company in Wood County. [REDACTED] said they were applying manure sludge quite heavily last Wednesday the day before that area received over 1” of rain on Thursday. [REDACTED] said he spoke with Ohio EPA employees, but did not receive a definitive answer and felt like his concerns were dismissed.

- Would someone please investigate [REDACTED] complaint? You can reach him at the phone number above if there is no record of his call.

Please see the attached 2012 Ohio EPA Inspection Report for the [REDACTED] Dairy – now the [REDACTED] Land Company. This Report specifically states on page 3 that no manure was supposed to be applied unless up-to-date soil samples and manure analyses are obtained. I regularly submit requests for the [REDACTED] Dairy/Dairy Acquisition 1/[REDACTED] Dairy/[REDACTED] Land Company public records, however, I don’t believe I have ever received copies of up-to-date soil samples or manure analyses. I also have a copy of a December 2015 Director’s Final Findings and Orders that “noted the lack of a Manure Management Plan (“MMP”) for the Facility, as required by the NPDES permit.”

- Would someone please investigate IF [REDACTED] has submitted up-to-date soil and samples or manure analyses. If so, would you please send me copies under Ohio’s Public Records Laws?
- Would someone also investigate how this NPDES-permitted CAFO can operate without a valid Manure Management Plan as required by the NPDES permit?

I appreciate your assistance with my concerns.  
Respectfully,

[REDACTED]  
[REDACTED]  
Cygnet, OH 43413  
[REDACTED]  
[REDACTED]

# Ohio EPA CAFO NPDES Permit Inspection Form 8/31/16

## Background Information

Inspection Details			
NPDES Numbers	State:	Federal:	21K00023 X BD
Name of Facility	Exemption 6 CAWD COMPANY, LLC		
Facility Contact	[Redacted]		
Phone:			
Facility Mailing Address			
Facility Location			
Support Location	KLAN, ATL - OR -		
Other Contact	OWNER - Exemption 6 [Redacted]		
Phone:	Cell: Exemption 6 [Redacted]	Fax:	Email: Exemption 6 [Redacted]
Receiving Stream	[Redacted]		

Impaired Watershed X ✓ ULSB

## Facility Information

Livestock Species	JERSEY COWS	Exemption 6 <del>NO</del> mature	NO REPORT REQUIRED
	LESS MANURE	calves - out as AP	

Description of Manure Storage  
 SAND PIT - CONCRETE - 1,000,000  
 MANURE STORAGE - 10 M gallons.  
 plan for sand lanes -

Manure Management  
 1 year or more  
 HAULING SAND IN 2014  
 NUTR - Picked at sand last year.

Mortality Management  
 PICKED UP ON-CALL - TO LANDFILL

Sanitary Wastewater Disposal  
 septic field - pumped at last year.  
 pumped. septic effluent pump

Process Wastewater	Non-contact cooling water	Milk waste	Water softener back flush	Other
		All to to the pit		

# Records Review

Production Area Inspections

yes

Manure Structures

Permit  
2.5.0

Structure

Max Operating Level

Current Manure Level

Storage Remaining

Drinking Water Lines

Overall Facility

Storm Water Controls

Manure Sampling Records

yes

land app records

Source

Sample Type

Date

Moisture %

NH4-N

Organic N

P<sub>2</sub>O<sub>5</sub>

K<sub>2</sub>O

Notes

Soil Sampling Records

Manure Distribution Records

DISCUSSED

SEND EXAMPLE

FORECAST

**Records Review Cont.**Manure Land  
Application  
Records**Volume****Acreage**

Acres owned

Acres leased

Other land

Total acres

**Forecast****Condition of  
Fields****Application  
Rate  
Determination****Crop Schedule****Crop Yields****Fertilizer  
Application**Storage Analysis  
by 9/15Annual Training  
Attendance

Annual Report

Fuel Stored on site  
(SPCC-1,320 gal)Schedule of  
Compliance

MMP Update

SEND

MMP

UPDATE

PACKET

Water Quality Sampling		
Spills or Discharges		
Facility Walk Around	Current Storage Freeboard	✓
	Condition of Structures	SILAGE
	Housekeeping	✓
	Storm Water Controls	
	Receiving Stream	NO N-RUNOFF CONSIDERED

LAST YEAR REPORTED

SWED

BLACK WATER TILE?

~~TRUE~~

FALSE

ⓧ

**Wilson, Rick**

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**From:** Exemption 6 Exemption 6  
**Sent:** Friday, August 19, 2016 11:43 AM  
**To:** Wilson, Rick  
**Subject:** RE: Exemption 6 Dairy inspection

Sounds good

Exemption 6

On Aug 19, 2016 8:17 AM, "Rick.Wilson@epa.ohio.gov" <Rick.Wilson@epa.ohio.gov> wrote:

Exemption 6 :

We can accommodate the August 31, 2016 inspection date you proposed.

The purpose of the site-visit/inspection is described below in this e-mail thread below. I will be joined by Mr. Dan Bruner, Inspector with the Ohio Department of Agriculture-Division of Livestock Environmental Permitting. (ODA-DLEP).

We plan to arrive Wednesday August 31, 2016 at 10:00 a.m. +/-, and plan to meet with you for approximately 1 to 1.5 hours.

*Re Biosecurity:*

*This will be the only livestock facility I visit during the week of Aug. 29. Further, both Dan Bruner and I will wear disposable rubber boots upon arrival. Please advise us of any additional biosecurity protocols that are in place.*

Please confirm this date and time. Thank you.

~rick

**Rick Wilson, Environmental Specialist**

Ohio EPA | Division of Surface Water

**Surface Water Improvement and Nonpoint Source-§319 program**

P.O. Box 1049, Columbus, OH 43216-1049

Ph: 614-644-2032

Fax: 614-644-2745

rick.wilson@epa.ohio.gov



**From:** Exemption 6 [mailto:Exemption 6]  
**Sent:** Friday, August 19, 2016 9:04 AM  
**To:** Wilson, Rick <Rick.Wilson@epa.ohio.gov>  
**Cc:** Exemption 6 Dairy <Exemption 6>  
**Subject:** RE: Exemption 6 Dairy inspection

Rick

Sorry about the delay getting back to you, I just got back from our family camping trip and had trouble booking with Delta.

I'm flying out on the 27<sup>th</sup> would be available on the 31<sup>st</sup>, if that doesn't work, I understand.

Anyways.....

Manager is Exemption 6 Exemption 6

Exemption 6

Exemption 6 Weston Ohio 43569

Thanks



Exemption 6

Exemption 6 Company LLC

Exemption 6

Klamath Falls Oregon

79603

Exemption 6

**From:** [Rick.Wilson@epa.ohio.gov](mailto:Rick.Wilson@epa.ohio.gov) [mailto:[Rick.Wilson@epa.ohio.gov](mailto:Rick.Wilson@epa.ohio.gov)]  
**Sent:** Tuesday, August 09, 2016 11:51 AM  
**To:** Exemption 6  
**Cc:** [Daniel.Bruner@agri.ohio.gov](mailto:Daniel.Bruner@agri.ohio.gov); [Kevin.Elder@Agri.ohio.gov](mailto:Kevin.Elder@Agri.ohio.gov); [Erin.Sherer@epa.ohio.gov](mailto:Erin.Sherer@epa.ohio.gov)  
**Subject:** Exemption 6 Dairy inspection

Exemption 6

We talked today about the Exemption 6 Dairy facility in Ohio, and that I need to follow up with an inspection, to determine the current status of the facility's operation and manure management, compliance with now expired NPDES, and determine next steps in permitting at this facility (either No Permit required, or permit needs renewed).

You indicated you plan to visit this facility in the coming week/weeks. If that is still the case, and you want to be present when I visit, please let me know at your earliest convenience what days you will be available

**I also need to the name and contact information for the current facility manager.** Please responds with that information.

I am tasked by Ohio EPA-Division of Surface Water management to visit this dairy as soon as possible and not later than Friday, August 26. I was hoping to get out to the facility no later than next Wednesday (August 17, 2016).

I have also cc'd the Ohio Department of Agriculture-Division of Livestock Environmental Permitting (Dan Bruner-Inspector, and Kevin Elder, Chief) with this message, and also Ohio EPA's Surface Water Permits program manager Erin Sherer.

You mentioned there are currently approximately [redacted] cows being milked at the [redacted] facility and some # of replacement heifers. You also indicated you would probably like to expand the herd there (and wonder how that process would need to go). I tried to explain to you the nuances of the State program for Confined Animal Feeding Facilities (CAFF's) and Ohio EPA's Federally enforceable permitting program for Concentrated Animal Feeding Operations (CAFOs), but it might be easier in person.

**!!!!The now-expired NPDES permit for [redacted] Dairy is located here!!!:**

[http://epa.ohio.gov/portals/35/cafo/2IK00023\\_BD.pdf](http://epa.ohio.gov/portals/35/cafo/2IK00023_BD.pdf)

You should review this document.

More general CAFO information is found here.

<http://www.epa.state.oh.us/dsw/cafo/index.aspx>

As mentioned to you by phone, unless the permit is removed from our books (through an NPR action), the conditions remain effective. One key element of the permit (linked above) that is relevant to the purpose of our requested meeting/inspection is Item N on page 20:

**N. In the event that this facility is closed for production purposes or is no longer a CAFO, this permit shall remain effective until the permittee demonstrates to the satisfaction of the Director that there is no remaining potential for a discharge of manure that was generated while the operation was a CAFO, other than agricultural storm water from land application areas. All manure shall be properly disposed of, and in the case of facility closure, the manure storage or treatment facilities shall be properly closed.**

Please let me know as soon as possible the name and contact info of the facility manager at [redacted] and whether you will be available in the very short term to join me at the facility.

Thank you

~rick

Rick Wilson, Environmental Specialist

Ohio EPA-Division of Surface Water

50 W. Town St.

Columbus, OH

614-644-2032

For Agency Use	Facility Name	Date Received (yy/mm/dd)
	Ohio EPA Permit Number	Application Number

01 EPA

## Application for Transfer of Ohio NPDES Permit

Division of Surface Water  
Permits and Compliance Section


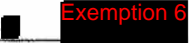
### A. Existing Permit Holder Information (Transferor)

- Facility Permit Number: 21K00023
- Application Number: OH
- Permittee Name: Exemption 6
- Facility Name: Exemption 6 Facility
- Mailing Address After Transfer:  
Exemption 6  
Exemption 6  
Klamath Falls, Oregon 97603

### B. Proposed Permit Holder Information (Transferee)

- Permittee Name (New): Exemption 6 Land Company LLC
- Phone: Exemption 6
- Facility Name (New): Exemption 6 Land Company LLC
- Mailing Address for all permit-related correspondence:  
Exemption 6  
Klamath Falls, Oregon 97603
- Facility Mailing Address (if different):
- Individual authorized to sign applications and Transfer Agreement pursuant to OAC 3745-33-03 (D) [principal executive officer, vice president or higher for a corporation; a general partner of a partnership; the proprietor of a proprietorship; principal executive officer; ranking elected official or duly-authorized employee of a public entity]:  
Exemption 6  
(Authorized Individual)

7. Authorization: Pursuant to 40 CFR Part 122.22 (b), the individual or position, identified in this space is duly authorized by the individual in Item 7 to sign all reports required by permit and other information which may be required by the Director:

  **Exemption 6** Owner  
(Name/Title/Position)

8. Operator of Facility:


Name:   **Exemption 6**

Address:    **Exemption 6**

Klamath Falls, Oregon 97603

9. Contact person for facility information or inspections:

Name:   **Exemption 6**

Phone:   **Exemption 6**

10. Describe any material modifications to production or facilities, subsequent to the transfer, which may alter the volume or characteristics of this discharge. (Attach additional pages as necessary)

None

Agreement to Transfer Permit

(Transferor) **Exemption 6** as the holder of an NPDES Permit which  
assumes responsibility, coverage and liability for operations involving discharges of wastewater from the  
facility located at **Exemption 6** 4121 1st 43511  
(Facility Location)

hereby applies for approval of the Director to transfer the permit responsibility, coverage and liability to  
**Exemption 6** **Exemption 6** LAND Company LLC  
(Transferee)  
**Exemption 6** agrees to continue to assume the  
(Transferor)

responsibility for compliance with all terms, limitations and conditions, and any coverage or liability  
thereunder for the period ending on Aug 26 / 2014 2014  
(Month/Day) (Year)

**Exemption 6** as the disclosed PEA permittee here:  
**Exemption 6** LAND COMPANY LLC  
Name of New Permittee  
agrees to assume the responsibility for compliance with the entire, of the coverage, responsibility and  
liability of the NPDES permit commencing on Aug 26 2014  
(Month/Day) (Year)

in witness whereof, the parties have executed this Agreement on  
Aug 26 2014  
(Month/Day) (Year)

Transferor **Exemption 6** Transferee **Exemption 6**  
By **Exemption 6** By **Exemption 6**  
The member The LLC

By signing this form, (Transferee) certify and acknowledge that I have read and fully understand the terms and conditions  
of NPDES Permit Number:

certify under penalty of law that the **Exemption 6** is and complete. I am aware that there are  
significant penalties for submitting fa  
lisions

(Transferee)

(Title)

(Date)





Google earth

4/2016







Google earth

feet 700  
meters 200

10/2015







Google earth

feet 700  
meters 200



5/2014





Image USDA Farm Service Agency

Google earth



11/2011





Google earth

feet  
meters



10/29/0

## Ohio EPA CAFO NPDES Permit Manure Management Plan Signature Page

The Manure Management Plan submitted for review and approval by Ohio EPA shall be signed in accordance with the following as required in 40 CFR 122.22:

(1) For a corporation. By a responsible corporate officer. For the purpose of this section, a responsible corporate officer means: (i) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

Note: EPA does not require specific assignments or delegations of authority to responsible corporate officers identified in Sec. 122.22(a)(1)(i). The Agency will presume that these responsible corporate officers have the requisite authority to sign permit applications unless the corporation has notified the Director to the contrary. Corporate procedures governing authority to sign permit applications may provide for assignment or delegation to applicable corporate positions under Sec. 122.22(a)(1)(ii) rather than to specific individuals.

(2) For a partnership or sole proprietorship. By a general partner or the proprietor, respectively; or

(3) For a municipality, State, Federal, or other public agency. By either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes: (i) The chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of EPA).

All reports required by permits, and other information requested by the Director shall be signed by a person described in paragraph (a) of this section, or by a duly authorized representative of that person.

A person is a duly authorized representative only if:

(1) The authorization is made in writing by a person described in paragraph (a) of this section;

(2) The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.) and,

(3) The written authorization is submitted to the Director.

Changes to authorization. If an authorization under paragraph (b) of this section is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of paragraph (b) of this section must be submitted to the Director prior to or together with any reports, information, or applications to be signed by an authorized representative.

Certification. Any person signing a document under paragraph (a) or (b) of this section shall make the following certification:

*"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."*

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Signature

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Date

## Ohio EPA CAFO NPDES Water Quality Monitoring

This form may be applicable for CAFOs covered under an individual permit that includes water quality monitoring of storm water from the production area. A grab sample shall be collected from the location specified in the permit during the months of May and November during the first 30 minutes of a rainfall event that causes a discharge from the sampling outfall. If collection of the grab sample during the first 30 minutes is inappropriate due to dangerous weather conditions, collect the sample as soon as possible after suitable conditions occur, and document the reason for delay.

Date of Sample: May / November \_\_\_\_\_

Time of Sample Collection: \_\_\_\_\_

Location of Sample: \_\_\_\_\_

Initials/Name of Sample Collector: \_\_\_\_\_

Was Sample Collected Within First 30 Minutes of Rainfall? Yes No

If No, Reason for Delay: \_\_\_\_\_

Was Sample Analyzed for BOD5, Total Suspended Solids, Ammonia, TKN, and Total Phosphorus?

Yes No

Are Laboratory Results Attached? Yes No

(Note the results should indicate the date the analyses were performed, the time the analyses were initiated, the initials or name of the individuals who performed the analyses, and the references for the analytical techniques or methods used. The laboratory should analyze the samples according to the test procedures approved under 40 CFR Part 136.)

Comments: \_\_\_\_\_

The precipitation at the facility should be recorded for two days prior to the sample collection and the day of the collection.

Total Precipitation Two Days Before Sample Collection: \_\_\_\_\_ inches

Total Precipitation One Day Before Sample Collection: \_\_\_\_\_ inches

Total Precipitation Day of Sample Collection: \_\_\_\_\_ inches

## **Ohio EPA CAFO NPDES Permit Storm Water Pond Outfall Monitoring**

Notice – This form should only be included in the manure management plan for facilities with storm water ponds that contain a discharge to surface waters that receive runoff from the production area. These ponds should only be receiving storm water associated with industrial activity and not manure, silage leachate, process wastewater, or any other wastewater. Storm water ponds receiving plate cooling water or other non-contact cooling water should be permitted and monitored under specific requirements in the NPDES permit that pertain to the non-contact cooling water discharge.



## Ohio EPA CAFO NPDES Permit Storm Water Pond Outfall Monitoring

Where applicable, a storm water pond located at the CAFO production area that has a discharging outlet to waters of the State shall be monitored through biannual water quality sample collection. A grab sample shall be collected from the outlet pipe during the months of March and November during the first 30 minutes of a rainfall event that causes the pond to discharge. If collection of the grab sample during the first 30 minutes is inappropriate due to dangerous weather conditions, collect the sample as soon as possible after suitable conditions occur, and document the reason for delay.

Date of Sample: March / November \_\_\_\_\_

Time of Sample Collection: \_\_\_\_\_

Location of Sample: \_\_\_\_\_

Initials/Name of Sample Collector: \_\_\_\_\_

Was Sample Collected Within First 30 Minutes of Rainfall? Yes No

If No, Reason for Delay: \_\_\_\_\_

Was Sample Analyzed for BOD5, Ammonia, TKN, and Total Phosphorus? Yes No

Are Laboratory Results Attached? Yes No

(Note the results should indicate the date the analyses were performed, the time the analyses were initiated, the initials or name of the individuals who performed the analyses, and the references for the analytical techniques or methods used. The laboratory should analyze the samples according to the test procedures approved under 40 CFR Part 136.)

Comments: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

## Ohio EPA CAFO NPDES Permit Production Area Discharge Monitoring

In the event that a spill, discharge, or overflow of manure occurs at any time from the production area to waters of the State, a water quality sample of the discharge shall be collected, Ohio EPA must be notified, and a follow up incident report must be submitted to Ohio EPA.

### Water Quality Sampling

Within the first **30 minutes** of the first knowledge of a discharge to waters of the State, a grab sample must be collected where the spill is entering the surface water (e.g., tile outlet discharge, concentrated flow surface flow into surface water, etc.). If sampling of the discharge within the first 30 minutes is inappropriate due to dangerous weather conditions, collect the sample as soon as suitable conditions occur and document the reason for delay.

Date of Sample: \_\_\_\_\_

Time of Sample Collection: \_\_\_\_\_

Initials/Name of Sample Collector: \_\_\_\_\_

Was Sample Collected Within First 30 Minutes of Discovery?                      Yes                      No

If No, Reason for Delay: \_\_\_\_\_

Was Sample Analyzed for BOD5, Ammonia, and Total Phosphorus?                      Yes                      No

Are Laboratory Results Attached?      Yes                      No

(Note the results should indicate the date the analyses were performed, the time the analyses were initiated, the initials or name of the individuals who performed the analyses, and the references for the analytical techniques or methods used. The laboratory should analyze the samples according to the test procedures approved under 40 CFR Part 136.)

### Ohio EPA Notification

Ohio EPA should be notified as soon as possible but no later than the first **24 hours** of first knowledge of a discharge to waters of the State by calling the Spill Hotline at **1-800-282-9378**.

Was Ohio EPA Spill Hotline Contacted?                      Yes                      No

### Incident Report

Within **14 days** of the discharge occurrence, a report must be submitted to Ohio EPA, Central Office, Division of Surface Water, P.O. Box 1049, Columbus, Ohio 43216-1049 that contains, at a minimum, the following information:

- ☐ Copy of Water Quality Sample Results
- ☐ Description of Reason For Discharge
- ☐ Location of Incident
- ☐ Estimate of Quantity and Duration of Discharge
- ☐ Quantity and Duration of Precipitation Prior to Incident
- ☐ Measures Taken to Remediate the Discharge
- ☐ Measures Taken to Prevent Reoccurrence

If the water quality sample results are not available at the time the report is submitted, they shall be submitted within 5 days of receipt from the laboratory.

Was a Complete Report Submitted to Ohio EPA?                      Yes                      No

Copy of Report Attached?                      Yes                      No

Date of Report Submittal: \_\_\_\_\_



## Ohio EPA CAFO NPDES Permit Manure Application on Frozen/Snow Covered Ground Records

The following records shall be maintained in addition to regular records for all instances of surface application of manure on frozen/snow covered ground. Other locations for manure disposal should be investigated prior to the land application. Stockpiling of solid manure shall be utilized rather than spreading on the field. Only limited quantities of manure shall be applied to address manure storage limitations until non-frozen or non-snow covered soils are available for manure application.

<b>Date of Application</b>			
<b>Location of Application</b>			
<b>Amount of Manure Applied (Gallons/Tons)</b>			
<b>Number of Acres</b>			
<b>Weather Conditions – 24 Hours Prior</b>	<b>Temperature</b>	<b>Precipitation</b>	<b>Chance of Precipitation (%)</b>
<b>Weather Conditions – Day Of Application</b>	<b>Temperature</b>	<b>Precipitation</b>	<b>Chance of Precipitation (%)</b>
<b>Weather Conditions – 24 hours After</b>	<b>Temperature</b>	<b>Precipitation</b>	<b>Chance of Precipitation (%)</b>
<b>Soil Conditions</b>	<b>Depth of Snow Cover</b>		
	<b>Frozen? Estimated Depth of Frozen Layer</b>		
	<b>Surface Residue Cover (Type and Percentage)</b>		
	<b>Field Slope</b>		
	<b>Available Water Capacity</b>		
<b>Setbacks Maintained? (200 feet from surface waters &amp; conduits to surface waters)</b>			
<b>Reason for Applying Manure</b>			

Concentrated field surface drainage and tile outlets shall be visually monitored at the conclusion of the manure application, and periodically afterwards when weather is likely to produce manure runoff including when temperatures rise, snow melts, and in conjunction with rainfall, etc., until the manure has been assimilated into the field and is no longer likely to discharge into waters of the State.

<b>Date of Field Inspection</b>	<b>Weather Conditions</b>	<b>Signs of Discharge</b>

## Ohio EPA CAFO NPDES Permit Monitoring and Inspection Requirements

Action	Frequency	Record Keeping Requirements
Collection of water quality samples from discharges from the production area. Samples should be analyzed for BOD5, ammonia, and total phosphorus.	Each time they occur.	Date, exact place, and time of sampling or measurements; b) the initials or name(s) of the individual(s) who performed the sampling or measurements; c) the date(s) analyses were performed; d) the time(s) analyses were initiated; e) the initials or name(s) of the individual(s) who performed the analyses; f) references and written procedures, when available, for the analytical techniques or methods used; and g) the results of such analyses, including the bench sheets, instrument readouts, computer disks or tapes, etc., used to determine these results. Please note that most of these records are included on the sample result sheets from the laboratory.
For new CAFOs (and existing CAFOs on and after April 1, 2007), collection of water quality samples from discharges from land application areas where manure was applied on frozen and/or snow covered ground. Samples should be analyzed for ammonia.	Each time they occur.	Same records for production area discharge samples listed above.
Recording of all discharges from production and land application areas in the operating records.	Each time they occur.	Cause, volume, and duration of the discharge and any corrective actions needed and the dates those actions were taken. Also maintain a copy of the report submitted to Ohio EPA.
Collection of water quality discharges from storm water ponds. Samples should be analyzed for BOD5, ammonia, TKN, and total phosphorus.	Twice per year in March and November.	Same records for production area discharge samples listed above.
Collection of representative manure samples for all manure storage or treatment structures. Samples should be analyzed for total nitrogen, ammonium nitrogen, organic nitrogen, phosphorus, potassium, and percent total solids.	Once per year.	Same records for production area discharge samples listed above.
Collection of soil samples of the manure application fields. Samples should be analyzed for pH, phosphorus, potassium, calcium, magnesium and cation exchange capacity.	Every three years.	Collection site and depth of sample. Same records for production area discharge samples listed above.
Monitor operating level of all manure storage or treatment facilities.	Once per week.	Date and time of observation, manure level in each structure.
Inspect manure storage or treatment facilities, including devices channeling contaminated storm water to the manure storage or treatment facility for evidence of erosion, leakage, animal damage, overflow, or discharge.	Once per week.	Date and time of inspection, structural integrity, vegetation condition, and any corrective actions needed and the dates those actions were taken.
Inspect storm water diversion devices or runoff diversion structures.	Once per week.	Date and time of inspection, observations of flow quantity and color, structural integrity (e.g., signs of cracks, sparse or stressed vegetation, erosion, etc.), any corrective actions needed and the dates those actions were taken.
Inspect drinking and cooling water lines that are located above ground, readily visible or accessible for daily inspections.	Daily.	Date and time of inspection, number of leaks, any corrective actions needed and the dates those actions were taken.
Monitor forecast at the CAFO location.	Every land application event.	Date, weather conditions (including percentage chance of precipitation) 24 hours prior to application, at the time of application, and 24 hours after application.
Inspect land application fields.	In accordance with manure management plan.	Date and signs of discharge or runoff into surface waters and/or conduits to surface waters of the State.
Inspect land application equipment.	In accordance with manure management plan.	List of equipment, date of inspections, corrective actions, calibration dates.

Any deficiencies found as a result of these inspections must be corrected as soon as possible. Deficiencies not corrected within 30 days must be accompanied by an explanation of the factors preventing immediate correction.

## Ohio EPA CAFO NPDES Permit Manure Land Application Restrictions

<b>Streams, Lakes, Ponds, Watercourses, Other Surface Waters, Waterways, Open Tile Line Intake Structures, or Other Conduits to Surface Waters</b>
Manure shall not be applied closer than <b>100 feet</b> , unless a 35-foot vegetated buffer has been established where manure application is prohibited. A mandatory 35-foot vegetated buffer must be established along fields with perennial streams regardless of setback requirement.
<b>Public Drinking Water Surface Water Intakes</b>
Land application shall not take place within the <b>emergency management zone</b> of a public water system using surface water. Otherwise, manure shall not be applied closer than <b>300 feet</b> from the edge of the field.
<b>Seasonal Salmonid and Cold Water Habitats</b>
Manure shall not be applied closer than <b>100 feet</b> , unless a 35-foot vegetated buffer has been established where manure application is prohibited.
<b>Public Drinking Water Wells</b>
Land application shall not take place within a <b>highly susceptible drinking water source protection area</b> (as defined by Ohio EPA) for a community public water system using ground water and not within the inner management zone for all other community public water systems using ground water.
<b>Private Drinking Water Wells</b>
For <b>injection application</b> and surface application followed by <b>incorporation within 24 hours</b> , manure shall not be applied closer than <b>100 feet</b> .
For <b>surface application</b> not followed by incorporation within 24 hours, manure shall not be applied closer than <b>300 feet</b> .
<b>Class V Agricultural Drainage Wells, Agricultural Wells, or Sinkholes</b>
For <b>injection application</b> and surface application followed by <b>incorporation within 24 hours</b> , manure shall not be applied closer than <b>100 feet</b> .
For <b>surface application</b> not followed by incorporation within 24 hours, manure shall not be applied closer than <b>300 feet</b> .
<b>Springs</b>
Manure shall not be applied closer than <b>300 feet</b> .
<b>Slope</b>
For fields with a slope <b>less than 15%</b> , surface application can be used when yearly average soil loss is less than five tons per acre or "T", whichever is less.
Manure shall not be applied to cropland <b>over 15%</b> slope or to pasture/hayland <b>over 20%</b> slope unless one of the following precautions are taken:
a. Immediate incorporation or injection with operations done on the contour, unless the field has 80% ground cover (residue or canopy);
b. Applications are timed during periods of lower runoff and/or rainfall (May 20 to October 15);
c. Split applications are made (separated by rainfall events) with single applications not exceeding 5,000 gallons per acre for liquid manure or 10 wet tons per acre for solid manure;
d. The field is established and managed in contour strips with alternated strips in grass or legume.
<b>Stockpiling of Manure</b>
Streams, Lakes, Ponds, Watercourses, Waterways, Open Tile Line Intake Structures, or Other Conduits to Surface Waters, minimum <b>300 feet</b> setback. (Stockpiling within waterways or concentrated flow areas is prohibited.)
Public and Private Wells/Springs, minimum <b>300 feet</b> setback.
Flooding/flood plains/floodways, <b>prohibited</b> .
Public Drinking Water Surface Intakes, minimum <b>1,500 feet</b> setback.
Class V Agricultural Drainage Wells and Sinkholes, minimum <b>300 feet</b> setback.
Slope, <b>0-6% only</b> .

## Ohio EPA CAFO NPDES Permit Manure Land Application Restrictions

Prior to land applying manure, **the land application area shall be inspected** to determine the suitability of the site for land application (considerations shall include tile location and depth, soil type, evidence of soil cracking, available water capacity of the soil, crop maturity, prior precipitation, forecasted precipitation, etc.) and field conditions shall be documented at the time of the inspection. Broken tiles or blow out holes shall be repaired prior to land application.

For fields with **soil cracks** greater than six inches deep, the soil must be tilled before the land application of liquid manure or the application must be delayed until the cracks are sealed. However, liquid manure applications may be made on tiled fields with growing crops if the application rate is less than or equal to a quarter of an inch or 6,700 gallons per acre and tile plugs are used or tile stops closed prior to application.

For fields that are **prone to flooding**, floodplains, or floodways, manure must be injected or incorporated within 24 hours of application. No manure application shall occur during the periods of expected flooding.

Land application of manure shall **not cause ponding or runoff**. For liquid manure applications, the application shall not exceed the available water capacity in the upper eight inches of the soil in the application field.

Land application shall **not occur on saturated soils** or during rain or runoff events, and shall not occur if the **forecast** contains a greater than **50% chance of precipitation** for any individual hour, for a period extending 24 hours after the commencement of land application.

If solid manure is applied on **conventionally tilled bare soil**, the manure shall be incorporated into the soil within two days after application on the land. This requirement does not apply to no-till fields, or fields where crops are actively growing.

Manure application shall not take place on fields where **soil loss** exceeds "T".

For land application sites with **subsurface tile drainage**, all field outlets shall be visually monitored before, during and after application of manure to the site and the results of that monitoring shall be recorded. Methods/devices to stop or capture subsurface drain flow shall be accessible. If manure reaches the subsurface drain outlet to waters of the State, the application of manure shall cease and the flow stopped or captured.

For land application of liquid manure to sites with **subsurface tile drainage**, the following criteria must be followed:

- Application rates shall be less than or equal to half an inch or 13,000 gallons per acre per application event.
- A tool shall be used that can disrupt and/or close the preferential flow paths in the soil using horizontal fracturing, or the surface of the soil shall be tilled three to five inches deep to a seedbed condition to soak up the liquid manure and keep it out of preferential flow channels.
- If injection is used, manure shall only be injected deep enough to cover manure with soil. The soil shall be tilled at least three inches below the depth of injection prior to application.
- For fields with growing crops or continuous no till fields where tillage is not an option, all tile outlets from the application area are to be plugged/tile stops closed prior to application.

Manure shall be managed in such a manner to prevent land application on **frozen or snow covered ground**. Failure to take appropriate action to avoid land application on frozen and/or snow covered ground is a violation of the Ohio NPDES permit and subject to enforcement.

If practical, manure should be injected and/or incorporated within 24 hours to minimize surface manure runoff. Where manure is not injected or incorporated within 24 hours, the following frozen and/or snow covered ground restrictions are mandatory. Other locations for manure disposal should be investigated prior to the land application. Stockpiling of solid manure shall be utilized rather than spreading on the field. Only limited quantities of manure shall be applied to address manure storage limitations until non-frozen or non-snow covered soils are available for manure application. Records must be maintained for all instances of application on frozen or snow covered ground that include: date, amount applied, location, acres applied to, weather and soil conditions including depth of snow cover, surface residue cover, and reason for applying manure at that time.

In addition to all other land application restrictions in the NPDES permit (restrictions on fields prone to flooding, not causing ponding or runoff, restrictions on saturated soils, and requirement for tiled fields), the following criteria must also be met for surface manure application on frozen or snow covered ground per application event per field per winter season:

- The field must have greater than or equal to ninety percent surface residue cover at the time of application, and vegetation/residue shall not be completely covered by ice and/or snow at the time of application.
- The maximum manure application rate is 5,000 gallons per acre for liquid manure, 10 wet tones per acre for solid manure with more than 50% moisture, and 5 wet tons per acre for solid manure with less than 50% moisture. Depending on soil hydrologic group and surface residue cover, the liquid manure application rate on frozen soils may need to be lowered to prevent ponding or runoff.
- Manure shall not be applied on more than twenty contiguous acres. Contiguous areas for application are to be separated by a break of at least 200 feet. Areas used for application are the be the furthest from surface waters and present the least potential for runoff.
- Setbacks from surface waters and conduits to surface waters (including grassed waterways and surface drains) must be a minimum of 200 feet. This setback shall also have at least 90% surface residue cover, and vegetation/residue shall not be completely covered by ice and/or snow at the time of application. This distance may need to be further increased due to local conditions and other setback restrictions.
- For fields with slopes greater than 6%, manure shall be applied in alternating strips 60 to 200 feet wide generally on the contour, or in the case that the field is managed in contour strips with alternative strips in grass or legume, manure shall only be applied on alternative strips. Note that the application rate shall be determined for each separate application strip area, not area of entire field.
- Manure phosphate applications exceeding 250 pounds per acre are prohibited.

Concentrated field surface drainage and tile outlets shall be visually monitored at the conclusion of the manure application, and periodically afterwards when weather is likely to produce manure runoff including when temperatures rise, snow melts, and in conjunction with rainfall, etc., until the manure has been assimilated into the field and is no longer likely to discharge into waters of the State.

## Ohio EPA CAFO NPDES Permit Land Application Area Discharge Monitoring

### Non Frozen/Snow Covered Ground

In the event that a spill or discharge manure occurs at any time from a land application area to waters of the State that is not agricultural storm water, Ohio EPA must be notified and a follow up report must be submitted to Ohio EPA.

### Ohio EPA Notification

Ohio EPA should be notified as soon as possible but no later than the first **24 hours** of first knowledge of a discharge to waters of the State by calling the Spill Hotline at **1-800-282-9378**.

Was Ohio EPA Spill Hotline Contacted?                      Yes                      No

### Incident Report

Within **14 days** of the discharge occurrence, a report must be submitted to Ohio EPA, Central Office, Division of Surface Water, P.O. Box 1049, Columbus, Ohio 43216-1049 that contains, at a minimum, the following information:

- ☐ Description of Reason For Discharge
- ☐ Location of Incident
- ☐ Estimate of Quantity and Duration of Discharge
- ☐ Quantity and Duration of Precipitation Prior to Incident
- ☐ Land Application Records
- ☐ Measures Taken to Remediate the Discharge
- ☐ Measures Taken to Prevent Reoccurrence

Was a Complete Report Submitted to Ohio EPA?                      Yes                      No

Copy of Report Attached?    Yes                      No

Date of Report Submittal: \_\_\_\_\_

## Frozen/Snow Covered Ground

In the event that a spill or discharge manure occurs at any time from a land application area to waters of the State from application to frozen and/or snow covered ground, a water quality sample of the discharge shall be collected\*, Ohio EPA must be notified, and a follow up report must be submitted to Ohio EPA.

### Water Quality Sampling

\*For existing CAFOs (on and after April 1, 2007) and new CAFOs, within the first **30 minutes** of the first knowledge of a discharge to waters of the State, a grab sample must be collected where the spill is entering the surface water (e.g., tile outlet discharge, concentrated flow surface flow into surface water, etc.). If sampling of the discharge within the first 30 minutes is inappropriate due to dangerous weather conditions, collect the sample as soon as suitable conditions occur and document the reason for delay.

Date of Sample: \_\_\_\_\_

Time of Sample Collection: \_\_\_\_\_

Initials/Name of Sample Collector: \_\_\_\_\_

Was Sample Collected Within First 30 Minutes of Discovery?                      Yes                      No

If No, Reason for Delay: \_\_\_\_\_

Was Sample Analyzed for Ammonia?                      Yes                      No

Are Laboratory Results Attached?                      Yes                      No

(Note the results should indicate the date the analyses were performed, the time the analyses were initiated, the initials or name of the individuals who performed the analyses, and the references for the analytical techniques or methods used. The laboratory should analyze the samples according to the test procedures approved under 40 CFR Part 136.)

### Ohio EPA Notification

Ohio EPA should be notified as soon as possible but no later than the first **2 hours** of first knowledge of a discharge to waters of the State by calling the Spill Hotline at **1-800-282-9378**.

Was Ohio EPA Spill Hotline Contacted?                      Yes                      No

### Incident Report

Within **14 days** of the discharge occurrence, a report must be submitted to Ohio EPA, Central Office, Division of Surface Water, P.O. Box 1049, Columbus, Ohio 43216-1049 that contains, at a minimum, the following information:

- ☐ Copy of Water Quality Sample Results
- ☐ Description of Reason For Discharge
- ☐ Location of Incident
- ☐ Estimate of Quantity and Duration of Discharge
- ☐ Quantity and Duration of Precipitation Prior to Incident
- ☐ Measures Taken to Remediate the Discharge
- ☐ Measures Taken to Prevent Reoccurrence
- ☐ Land Application Records

If the water quality sample results are not available at the time the report is submitted, they shall be submitted within 5 days of receipt from the laboratory.

Was a Complete Report Submitted to Ohio EPA?                      Yes                      No

Copy of Report Attached?                      Yes                      No

Date of Report Submittal: \_\_\_\_\_

## Ohio EPA CAFO NPDES Permit Incident Report

Within 14 days of a discharge occurrence from either the production or land applications areas, a report must be submitted to Ohio EPA, Central Office, Division of Surface Water, P.O. Box 1049, Columbus, Ohio 43216-1049 that contains, at a minimum, the following information.

<b>Date</b>	
<b>Name of Facility</b>	
<b>NPDES Permit Number</b>	
<b>Date of Incident</b>	
<b>Description of Reason for Discharge</b>	
<b>Location of Incident (Include Latitude and Longitude)</b>	
<b>Estimate of Quantity and Duration of Discharge</b>	
<b>Quantity and Duration of Precipitation Prior to Incident</b>	Day Before: Day Of:
<b>Measures Taken to Remediate the Discharge</b>	
<b>Measures Taken to Prevent the Reoccurrence</b>	
<b>Copy of Water Quality Sample Results Attached (If Applicable)</b>	Yes    No
<b>Copy of Land Application Records Attached (If Applicable)</b>	Yes    No
<b>Signature</b>	

Attach additional pages if necessary.

If the water quality sample results are not available at the time the report is submitted, they shall be submitted within 5 days of receipt from the laboratory.

## Ohio EPA CAFO NPDES Permit Manure Storage Evaluation

Adequate manure storage volume shall be provided and maintained to prevent the necessity of land applying manure on frozen and/or snow covered ground. No later than September 15<sup>th</sup> of each year, an evaluation must be conducted of all manure storage or treatment structures to determine what steps are needed to avoid the need to land apply manure on frozen or snow covered fields for the upcoming winter.

Date of Evaluation:

Storage Structure	Current Volume of Manure in Structure (tons/gallons)	Current Storage Volume Remaining (tons/gallons)	Storage Volume Required for Winter (tons/gallons)	Amount of Manure to Be Removed (tons/gallons)	Description of Manure Disposal/Utilization For Manure to be Removed (tons/gallons)

Comments:

Was this manure removal plan accomplished?

If so, when?

If not, please explain:



## Exemption 6 DAIRY

### NPDES MANURE MANAGEMENT PLAN SUMMARY

03/20/2013

- Size of farm: [redacted] Holstein heifers, [redacted] lb. ave. size.
- Heifers are bedded with sand.
- All manure distributed to farm land managed by others: [redacted] acres shown in MMP as example rotation with local cooperating farmer.
- Manure applied at agronomic rates during the crop rotation over example available acres results in a deficit of phosphate and potash due to more crop removal than manure nutrient applications.
- Manure is stored in 2 structures:
  - 845,898 gallon concrete basin for sand manure and heavy solids storage providing 103 days of total manure storage.
  - 9,074,658 gallon earthen storage pond for liquid manure, providing 1,108 days of total manure storage.
  - Combined manure storage is 1,211 days for annual manure and net precipitation on structures (2,818,137 gallons manure + 170,906 gallons net precipitation for a total of 2,989,043 gallons).
- Mortality is taken to a separate dairy facility for composting. ✓
- ODA operating records are utilized at the [redacted] Dairy farm.

#### Manure Management Plan includes:

1. MMP worksheets for nutrient budget (8).
2. Manure analyses (2).
3. Soil test analyses and farm sampling maps.
4. Facility record forms.
- 5) Mortality: taken off site to another farm.
- 6) Crop Rotation for 5yrs

## Manure Production and Characteristics

### FACILITY ANIMAL INFORMATION

FACILITY: **Exemption 6** Dairy

DATE: 03/15/13

Animal Species:	Animal Group:	Projected Animal Weight: lb.	Animal Numbers	Days Facility Occupied Annually:	Annual Dry Tons Generated:	Annual CF Manure Generated:	Annual Gallons Manure Generated
Dairy	Milk Cows	1,400	-	365	0	0	0
	Dry Cows	1,400	-	365	0	0	0
	Dry Cows	1,400	-	365	0	0	0
	Heifers	<b>Exemption 6</b>	<b>Exemption 6</b>	365	1,139	292,000	2,184,452
	Bulls	1,500	-	365	0	0	0
					<b>1,139</b>	<b>292,000</b>	<b>2,184,452</b>

Reference: Calculations based on Appendix to rules 901:10-2-04 & 901:10-2-10, MWPS-18 (1) Manure Characteristics.

MidWest Plan Service, Iowa State University, Ames, IA.

**Exemption 6 Dairy Manure Storage Info****C 7.14**

Annual Rainfall (Wood Co., Ohio):	32.5 inches	source: NRCS efotg
Annual Surface Evaporation (Wood Co., Ohio)	29.9 inches	source: NRCS efotg

Dimensions of Ponds:

	width, ft.	length, ft.	surface area @ berm	volume, c.f. @ MOL	Annual volume, gallons
Concrete Basin sand manure	118	140	16,520.0	113,073	845,898
Manure Storage Pond	180	494	88,920.0	1,213,027	9,074,658
				total =	9,920,556
Total surface area		105,440 sq.ft.			
Net annual precip. volume	=	22,845 cu.ft.			
	=	170,906 gallons			

Manure Volume

gallons per day heifer manure	=	5,985 gallons/day	
Days of operation annually	=	365 days	
Tons of sand bedding used monthly	=	360 tons	
Sand bedding density	=	102 lb/cu.ft.	
Volume of sand added to manure annually	=	633,685 gallons/year	<div> <div>8,640,000 lbs sand</div> <div>1,740,149 lbs manure</div> <div>10,380,149 lbs sand manure</div> <div>5,190 tons</div> </div>
Total annual manure volume	=	2,818,137 gallons/year	

Storage Capacity

Annual manure + net precipitation	=	2,989,043 gallons
Total storage capacity provided	=	1,211 days
Storage capacity provided, concrete basin only	=	103 days
Storage capacity provided, pond 2 only	=	1,108 days

**Exemption 6 Dairy****PART C 7.13**

15-Mar-13

**Manure Nutrient Analyses: Holding Pond Analysis**

(actual and/or estimated):	Manure pond values chosen		
Lab no. if actual sample(1):	63047		
Date of sample:	10/17/2013		
Solids %	1.14%		
Tot. N per 1000 gal	3.70		
Ammonia N per 1000 gal	1.40	39%	Avail. Ammonia-N (5)
Organic N per 1000 gal	2.30	29%	Avail. Organic-N (5)
Avail. N per 1000 gal	1.21		
N avail. % (after land application)	32.8%		
P2O5 per 1000 gal	3.00		
K2O per 1000 gal	14.30		

Manure volume used in plan (gallons) 2 2,143,145

MAXIMUM (N) APPLICATION RATES:		LIQUID MANURE	98.9%	moisture basis		
For corn		Gallons/acre (as-is)	Avail. Nitrogen/a	Phosphate/a	Potash/a	Dry tons/a
Standard rate annual rate chosen (4) =	13,500		16	41	193	0.6
Acres required at standard application rate =	158.8					

(1) Manure sample from Exemption 6 Dairy (facility)

(2) Total manure volume (incl. precip. on storage structures) less concrete basin manure retained.

(4) Annual rate chosen for planning purposes; not recommendation nor one-time application rate.

(5) Ave. April-November application period, incorp. + non-incorp. manure.

N Avail. factors from Appendix C Table 6 901:10-2-14

**Exemption 6 Dairy**

15-Mar-13

**PART C 7.14****Manure Nutrient Analyses: Sand Manure**

(actual and/or estimated):	Sand manure values chosen	N Avail. Factors
Lab no. if actual sample(1):	63044	Appendix C Table 6
Date of sample:	10/17/2012	901:10-2-14
Solids %	13.1%	
Tot. N per ton	6.2	
Ammonia N per ton	0.4	39% Avail. Ammonia-N (5)
Organic N per ton	5.8	29% Avail. Organic-N (5)
Avail. N per ton	1.81	
N avail. % (after land application)	29.2%	
P2O5 per ton	3.3	
K2O per ton	3	

Solid manure wgt. used in plan (tons)<sup>2</sup> 5,190

MAXIMUM (N) APPLICATION RATES:	SOLID MANURE	86.9%	moisture basis			
For corn	Tons/acre (as-is)	Avail. Nitrogen/a	Phosphate/a	Potash/a	Dry tons/a	
Standard rate annual rate chosen (4) =	30.0	54	99	90	3.9	
Acres required at standard application rate =	173.0					

(1) Manure sample from Exemption 6 Dairy (facility)

(2) Assume concrete basin will be cleaned out annually as a high-solids slurry material, top liquid pumped to large pond.

(4) Annual rate chosen for planning purposes: not recommendation nor one-time application rate.

(5) Ave. April-November application period, incorp. + non-incorp. manure utilizing  
N Avail. factors from Appendix C Table 6 901:10-2-14

# Crop Rotation And Nutrient Removal

## NUTRIENT BALANCE EVALUATOR

ver. 012203

FACILITY: **Exemption 6 Dairy**

PART C 6.1

DATE: **3/15/2013**

## ROTATION PLANNER

	AVAILABLE CROPS					
	CORN SLG	WHEAT	STRAW	SOYBEANS	CORN GRAIN	ALFALFA
ESTIMATED YIELD =	18.0	66	66	50	165	6
yield unit =	tons/a	bu/a	bu/a	bu/a	bu/a	tons/a
YRS. IN ROTATION (0 if not in rotation) =	1	1	1	1	1	1
ACRES/YEAR (0 if not in rotation) =	85	100	100	332	128	120
ACRES/YEAR PRECEDED BY LEGUME =	85					
NITROGEN CREDIT PRIOR LEGUME (1) =	30				30	
NITROGEN RECOMMENDATION/ACRE (2) =	197	100			197	
NET NITROGEN RECOMMENDATION/ACRE (3) =	167				167	
NITROGEN REMOVED/UNIT/YEAR (4) =	9	1.27	0.55	3.8	0.9	56
P2O5 REMOVAL/UNIT/YEAR (4) =	3.1	0.64	0.09	0.8	0.37	13.3
K2O REMOVAL/UNIT/YEAR (4) =	9	0.36	0.91	1.4	0.27	60
Total rotation years =	5					
Total acres in rotation =	764.6					
Total N utilized annually =	156,417	lbs/year				
Total legume N removed annually =	103,400	lbs/year				
Total P2O5 removed annually =	40,207	lbs/year				
Total K2O removed annually =	94,277	lbs/year				
Total P2O5 removed per rotation =	201,035	lbs P2O5				
Total K2O removed per rotation =	471,383	lbs K2O				
ave. removal =	52.6	lbs/a/year P2O5				
ave. removal =	123.3	lbs/a/year K2O				

Note (1): Base upon Appendix C Table 4 for rule 901:10-2-14, Residual Nitrogen credits

N credits: Soybeans	30
Grass sod/pastures	40
Annual legume cover crop	30
Established forage legume	$40 + 20 \times (\text{plants}/\text{ft}^2)$
	to maximum of 140 lb. of N
Corn and most other crops	0

Note (2): Based upon Appendix C Tables 2 & 3 of rule 901:10-2-14

Corn:  $N \text{ (lb/acre)} = -27 + (1.36 \times \text{yield potential}) - N \text{ credit}$

Note (3): INCLUDES Nitrogen credit for prior legume.

Note (4): From Appendix C Table 1 of rule 901:10-2-14

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# Summary Nutrient Budget

## Part C 6.2

CROP ROTATION & NUTRIENT BALANCE: **Exemption 6 Dairy**  
DATE: **15/2013**

DATE: 1/3/2013

	Manure Pond liquid manure		Concrete Basin Sand Manure	
Standard max.application rate chosen (1):	27,000	gallons	30	tons
Total manure distributed off of managed farm land (distribution to others):	100.0%		100.0%	
Total manure to apply/yr. (2):	2,143,146	gallons	5,190	tons
Total manure applied/yr:	2,143,146	gallons	5,190	tons
<u>Crop Rotation:</u>	Corn Silage	Corn Grain	Wheat	Straw
no.of years in rotation:	1	1	1	1
acres of crop/year	85	128	100	100
yield, tons or bushels/acre	18.0	165	66	50
Sand manure concrete basin prior rate, tons/acre/year	30.0	30.0		
Sand manure concrete basin manure acres covered/year	85	88		
Storage pond manure rate prior to crop, gallons/acre/ year	-	13,500		
Storage pond manure acres covered/year	-	38.8		
total manure P2O5 applied per year:	8,415	10,281	-	-
ave. manure P2O5 lbs/a (total crop)/year:	99	81	-	-
total manure K2O applied in rotation:	7,650	15,401	-	-
manure K2O lbs/a (total crop)/year:	90	121	-	-
P2O5 lbs/acre removed/year:	56	61	42	6
annual total lbs. P2O5 removed:	4,743	7,790	4,224	594
K2O lbs/acre removed/year:	162	45	24	60
annual total lbs. K2O removed:	13,770	5,685	2,376	6,006
Annual +/- P2O5	3,672	2,491	(4,224)	(594)
Annual +/- K2O	(6,120)	9,716	(2,376)	(6,006)
Total Rotation years =	5			
				Alfalfa Hay
				1
				120
				6.0
				-
				13,500.0
				120
				4,860
				41
				23,166
				193
				80
				9,576
				360
				43,200
				(4,716)
				(20,034)

### PER ROTATION BASIS:

Lbs. P2O5 Applied:	117,782
Lbs K2O Applied:	231,085
Lbs. P2O5 Removed:	(201,035) (4)
Lbs. K2O Removed:	(471,383) (4)
Net P2O5/acre after full rotation =	(109) (5)
Net K2O/acre after full rotation =	(278) (6)

NOTES: 1 For planning purposes only. ref. C 7.13 and C 7.14

2 Assumption is that total nutrients are contained within both manure storage structures, and will be distributed during rotation period over cropland equally (solid and liquid manure).

4 reference C 6.1

5 Depending on initial soil test levels, additional phosphate may have to be added during the full rotation.

6 Depending on initial soil test levels, additional potash may have to be added during the full rotation.

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## P-SOIL TEST EVALUATION

NOTES:

**FACILITY:** Exemption 6 Dairy

DATE: 3/15/2013

- (1) Based upon NRCS Conservation Practice Standard Code 633, Table 3.
- (2) Farmed acreage where P soil test levels  $\leq 150$  ppm.
- (3) Acreage where current soil tests are available only ( $< 3$  yr.)
- (4) All fields rated high due to likely presence of systematic tile.

	Mehlich III
CRITICAL UPPER SOIL TEST LEVEL, ppm-P =	150
INTERMEDIATE SOIL TEST LEVEL, ppm-P =	100
CRITICAL LOWER SOIL TEST LEVEL, ppm-P =	40
Ave. rotational lbs. P/acre/yr. removal =	23
Rotation length, years =	5
Total usable rotation acres (2) =	764.6
Total ave. lbs. manure P addition/acre/year =	13.4

ave. lbs. manure P applied/a/yr. =

ASSUMES ONLY MANURE P ADDED

**Predicted Soil Test Levels (1):**

Full Rotational Length of 5 years	13.4	Soil Test ppm-P if manure appl. @ ave. rates (3)	ACRES	Nitrogen Leaching Index Rating Potential (4)
9	23.1	23.03	High	
1	25.1	23.03	High	
2	36.1	23.03	High	
3	27.1	23.03	High	
7	61.1	17.80	High	
5	59.1	17.80	High	
8	72.1	15.95	High	
6	90.1	15.95	High	
3	27.1	18.35	High	
8	32.1	18.35	High	
5	29.1	19.23	High	
1	35.1	19.23	High	
3	17.1	19.23	High	
1	25.1	19.23	High	
9	73.1	19.60	High	
2	86.1	24.10	High	
7	41.1	12.73	High	
5	43.6	12.73	High	
5	44.6	12.73	High	
9	93.1	21.75	High	
7	61.1	21.75	High	
1	35.1	24.20	High	
1	45.1	24.20	High	
8	52.1	24.20	High	
3	47.1	19.90	High	
8	62.1	19.90	High	

### SOIL TEST INFORMATION

Test Date	FIELD NAME	FIELD ID	Sample No.	ICP (3)	manure appl.		Index Rating Potential (4)
				ppm-P	@ ave. rates (3)	ACRES	
10/12/2010	Exemption 6	2	A	29	23.1	23.03	High
10/12/2010	Exemption 6	2	B	31	25.1	23.03	High
10/12/2010	Exemption 6	2	C	42	36.1	23.03	High
10/12/2010	Exemption 6	2	D	33	27.1	23.03	High
7/11/2011	Exemption 6	5	A	67	61.1	17.80	High
7/11/2011	Exemption 6	5	B	65	59.1	17.80	High
7/11/2011	Exemption 6	6	A	78	72.1	15.95	High
7/11/2011	Exemption 6	6	B	96	90.1	15.95	High
7/9/2010	Exemption 6	7	A	33	27.1	18.35	High
7/9/2010	Exemption 6	7	B	38	32.1	18.35	High
7/9/2010	Exemption 6	9	A	35	29.1	19.23	High
7/9/2010	Exemption 6	9	B	41	35.1	19.23	High
7/9/2010	Exemption 6	9	C	23	17.1	19.23	High
7/9/2010	Exemption 6	9	D	31	25.1	19.23	High
7/11/2011	Exemption 6	11	A	79	73.1	19.60	High
7/11/2011	Exemption 6	12	A	92	86.1	24.10	High
7/11/2011	Exemption 6	14	A	47	41.1	12.73	High
7/11/2011	Exemption 6	14	B	49.5	43.6	12.73	High
7/11/2011	Exemption 6	14	C	50.5	44.6	12.73	High
7/13/2010	Exemption 6	16	A	99	93.1	21.75	High
7/13/2010	Exemption 6	16	B	67	61.1	21.75	High
11/12/2010	Exemption 6	17	A	41	35.1	24.20	High
11/12/2010	Exemption 6	17	B	51	45.1	24.20	High
11/12/2010	Exemption 6	17	C	58	52.1	24.20	High
7/13/2010	Exemption 6	19	A	53	47.1	19.90	High
7/13/2010	Exemption 6	19	B	68	62.1	19.90	High



**Exemption 6 Dairy, LLC Soil Test Evaluation - C 6.3**

CRITICAL UPPER SOIL TEST LEVEL, ppm-P =	150
INTERMEDIATE SOIL TEST LEVEL, ppm-P =	100
CRITICAL LOWER SOIL TEST LEVEL, ppm-P =	40
Ave. rotational lbs. P/acre/yr. removal =	23
Rotation length, years =	5
Total usable rotation acres (2) =	764.6
Total ave. lbs. manure P addition/acre/year =	13.4

ASSUMES ONLY MANURE P ADDED

Predicted Soil Test Levels (1):

Full Rotational  
Length of  
5  
years

13.4

Soil Test  
ppm-P if  
manure appl.  
@ ave. rates (3)

Nitrogen  
Leaching  
Index Rating  
Potential (4)

**SOIL TEST INFORMATION**

Mehlich III  
ICP (3)  
ppm-P

Test Date	FIELD NAME	FIELD ID	Sample No.	ppm-P	ACRES	
7/27/2011	Exemption 6	20	A	19.5	13.6	18.90 High
7/27/2011	Exemption 6	20	B	22.5	16.6	18.90 High
7/27/2011	Exemption 6	20	C	24	18.1	18.90 High
10/16/2010	Exemption 6	23	A	63	57.1	19.67 High
10/16/2010	Exemption 6	23	B	64	58.1	19.67 High
10/16/2010	Exemption 6	23	C	70	64.1	19.67 High
7/13/2010	Exemption 6	58	A	31	25.1	20.80 High
7/13/2010	Exemption 6	58	B	29	23.1	20.80 High
7/27/2011	Exemption 6	59		52	46.1	17.60 High
7/27/2011	Exemption 6	60		82.5	76.6	19.10 High
10/18/2010	Exemption 6	61	A	59	53.1	19.87 High
10/18/2010	Exemption 6	61	B	54	48.1	19.87 High
10/18/2010	Exemption 6	61	C	37	31.1	19.87 High
Total crop and manure acreage =					764.6	

REPORT NO.  
F12290-6009

ACCOUNT NUMBER  
94018

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QUALITY ANALYSES FOR INFORMED DECISIONS

TO: Exemption 6 DAIRY LTD.  
Exemption 6  
ANTWERP, OH 45813-9632

LAB NUMBER: 63047  
MANURE TYPE: DAIRY, LIQUID PIT  
SAMPLE ID: Exemption 6 LIQ PIT

### MANURE ANALYSIS REPORT

DATE SAMPLED: 10/14/2012  
DATE RECEIVED: 10/16/2012  
DATE REPORTED: 10/17/2012 PAGE: 5 of 5

PARAMETER	UNIT	ANALYSIS RESULT	TOTAL POUNDS PER 1,000 GAL**	FIRST YEAR AVAILABILITY @ POUNDS PER 1,000 GAL
Moisture	%	98.86	8235.0	
Solids	%	1.14	95.0	
Nitrogen, Total (TKN)	%	0.045	3.7	2.1 *
Nitrogen, Ammonium (NH <sub>4</sub> -N)	%	0.017	1.4	1.4 *
Nitrogen, Organic (N)	%	0.028	2.3	0.7 *
Phosphorus (P)	%	0.016	3.0 (as P <sub>2</sub> O <sub>5</sub> )	3.0 (as P <sub>2</sub> O <sub>5</sub> ) *
Potassium (K)	%	0.143	14.3 (as K <sub>2</sub> O)	14.3 (as K <sub>2</sub> O) *

@ Estimate of first-year availability does not account for incorporation losses. Consult MWPS-18, "Livestock Waste Facilities Handbook" for additional information.

\* Source: MWPS-18, Livestock Waste Facilities Handbook, 1993

\*\* Manure density assumed to be 8.33 lb/gallon

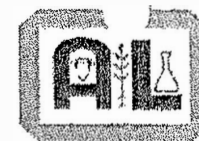
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ACCOUNT NUMBER  
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QUALITY ANALYSES FOR INFORMED DECISIONS

TO: Exemption 6 DAIRY LTD.  
Exemption 6  
ANTWERP, OH 45813-9632

LAB NUMBER: 63044

MANURE TYPE: DAIRY, SOLID WITH BEDDING

SAMPLE ID: Exemption 6 SOLID PIT

## MANURE ANALYSIS REPORT

DATE SAMPLED: 10/14/2012

DATE RECEIVED: 10/16/2012

DATE REPORTED: 10/17/2012 PAGE: 2 of 5

PARAMETER	UNIT	ANALYSIS RESULT	TOTAL POUNDS PER TON	FIRST YEAR AVAILABILITY @ POUNDS PER TON
Moisture	%	86.87	1737.4	
Solids	%	13.13	262.6	
Nitrogen, Total (TKN)	%	0.312	6.2	1.9 *
Nitrogen, Ammonium (NH <sub>4</sub> -N)	%	0.020	0.4	0.4 *
Nitrogen, Organic (N)	%	0.292	5.8	1.5 *
Phosphorus (P)	%	0.073	3.3 (as P <sub>2</sub> O <sub>5</sub> )	3.3 (as P <sub>2</sub> O <sub>5</sub> ) *
Potassium (K)	%	0.126	3.0 (as K <sub>2</sub> O)	3.0 (as K <sub>2</sub> O) *

@ Estimate of first-year availability does not account for incorporation losses. Consult MWPS-18, "Livestock Waste Facilities Handbook" for additional information.

\* Source: MWPS-18, Livestock Waste Facilities Handbook, 1993







VILLAGE OF WESTON

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B
C
D

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CATCHBASIN

Exemption 6

Exemption 6

DAIRY SITE

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Exemption 6

CATCHBASIN

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B
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Exemption 6

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CITY OF  
BOWLING GREEN





F10288-0175

Account No.

54540

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**QUALITY ANALYSES FOR INFORMED DECISIONS**

To: Exemption 6 DAIRY

Exemption 6

WESTON, OH 43569-9694

For: Exemption 6

Field: 2

Date Received: 10/12/2010

Date Reported: 10/18/2010

**SOIL TEST REPORT**

Page: 1 of 1

Sample ID	Lab Number	Organic Matter %	Phosphorus		Potassium K ppm	Magnesium Mg ppm	Calcium Ca ppm	Sodium Na ppm	pH		Cation Exchange Capacity meq/100g	Percent Base Saturation				
			Available P ppm P	Bray P2 ppm P					Soil pH	Buffer pH		%K	%Mg	%Ca	%H	%Na
A	75071	3.5	29 M		158 H	360 H	1900 M		7.1		12.9	3.1	23.2	73.6		
B	75072	3.9	31 H		192 H	415 H	2200 M		7.2		15.0	3.3	23.1	73.6		
C	75073	3.4	42 H		245 VH	480 H	2400 M		7.2		16.6	3.8	24.1	72.2		
D	75074	3.5	33 H		249 VH	265 H	1650 M		6.5	6.9	12.3	5.2	18.0	67.1	9.8	
			Average: 33.75													

VL = VERY LOW L = LOW M = MEDIUM H = HIGH VH = VERY HIGH

Sample ID	Sulfur S ppm	Zinc Zn ppm	Manganese Mn ppm	Iron Fe ppm	Copper Cu ppm	Boron B ppm	Soluble Salts mmhos/cm	Nitrate NO3-N ppm	Ammonium NH4-N ppm	Bicarb P ppm					Comments

# Soil Analysis Report



Exemption 6

Exemption 6

Exemption 6

00111528

Exemption 6

Farm

Received: 08-Jul-11

Reported: 11-Jul-11

Lab Number	842354	842355	842356	842357	842358	842359	842360	842361	842362
Field	12A	14A	6A	5A	14B	6B	11A	5B	14C
Sample No.									
C.E.C.	14.5	14.5	10.9	15.2	15.0	8.9	14.9	16.1	15.6
Org Matter	3.5	3.1	2.8	3.5	3.4	2.9	4.2	3.8	3.8
Soil pH	5.8	5.9	6.4	6.2	5.5	6.2	6.0	6.0	5.8
Lime Index	65	66	69	67	64	68	66	66	65
P lbs/ac	183 ↑	94	155 ↑	134 ↑	99	191 ↑	158 ↑	130	101
K lbs/ac	242 ↓	203	251	372 ↑	167 ↓	242	295	402 ↑	257
Ca lbs/ac	2543	3037	2808	3364	2455	1792	3071	3332	3060
Mg lbs/ac	446	440	568	665	356	410	502	585	390
SO4S lbs/ac									
B lbs/ac									
Cu lbs/ac									
Mn lbs/ac									
Zn lbs/ac									
Ca Sat'n.	44 %	52 %	64 %	55 %	41 %	50 %	52 %	52 %	49 %
Mg Sat'n.	13 %	13 %	21 %	18 %	10 %	19 %	14 %	15 %	10 %
K Sat'n.	2 %	2 %	3 %	3 %	1 %	4 %	3 %	3 %	2 %
Base Sat'n.	59 %	67 %	89 %	76 %	52 %	73 %	68 %	70 %	61 %
Ca/Mg	3.4	4.1	3.0	3.0	4.1	2.6	3.7	3.4	4.7
Mg/K	6.0	7.1	7.4	5.8	6.9	5.5	5.5	4.7	4.9
NO3N ppm									
Na lbs/ac									
Fe.									
SS									
Pct. Sand									
Pct. Silt									
Pct. Clay									
Texture									

optimum 40-89  
optimum 250-330

F10190-0062

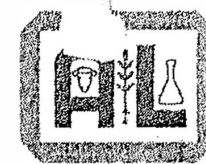
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**QUALITY ANALYSES FOR INFORMED DECISIONS**

To: **Exemption 6** DAIRY LLC  
**Exemption 6**  
 WESTON, OH 43569

For: **Exemption 6**

Field: 16

P.O. NUMBER: 190-0062

Date Received: 07/09/2010

Date Reported: 07/13/2010

**SOIL TEST REPORT**

Page: 1 of 1

Sample ID	Lab Number	Organic Matter %	Phosphorus		Potassium K ppm	Magnesium Mg ppm	Calcium Ca ppm	Sodium Na ppm	pH		Cation Exchange Capacity meq/100g	Percent Base Saturation				
			Aval able P ppm-P	Bray P2 ppm-P					Soil pH	Buffer pH		% K	% Mg	% Ca	% H	% Na
A	17351	2.6	99 VH		124 M	275 VH	1000 M		6.9		7.7	4.1	29.7	64.7	1.5	
B	17352	3.5	67 VH		133 M	375 VH	1400 M		6.8		10.8	3.2	29.0	64.9	3.0	

VL = VERY LOW L = LOW M = MEDIUM H = HIGH VH = VERY HIGH

Sample ID	Sulfur S ppm	Zinc Zn ppm	Manganese Mn ppm	Iron Fe ppm	Copper Cu ppm	Boron B ppm	Soluble Salts mmhos/cm	Nitrate NO3-N ppm	Ammonium NH4-N ppm	Bicarb-P P ppm					Comments



F10190-0058

Account No.

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**QUALITY ANALYSES FOR INFORMED DECISIONS**

To: **Exemption 6** DAIRY LLC  
**Exemption 6**  
 WESTON, OH 43569

For: **Exemption 6**

Field: 9

P.O. NUMBER: 190-0058

Date Received: 07/09/2010

Date Reported: 07/13/2010

**SOIL TEST REPORT**

Page: 1 of 1

Sample ID	Lab Number	Organic Matter %	Phosphorus		Potassium K ppm	Magnesium Mg ppm	Calcium Ca ppm	Sodium Na ppm	pH		Cation Exchange Capacity meq/100g	Percent Base Saturation				
			Available P ppm-P	Bray P2 ppm-P					Soil pH	Buffer pH		% K	% Mg	% Ca	% H	% Na
A	17341	3.7	35 H		203 H	385 H	1850 M		6.5	6.9	14.2	3.7	22.6	65.2	8.5	
B	17342	3.7	41 H		167 H	285 H	1500 L		5.9	6.7	13.9	3.1	17.1	53.9	25.9	
C	17343	4.0	23 M		148 M	325 H	1600 M		6.2	6.8	13.5	2.8	20.1	59.3	17.8	
D	17344	3.6	31 H		157 H	295 H	1500 L		5.9	6.7	14.0	2.9	17.6	53.7	25.8	

VL = VERY LOW L = LOW M = MEDIUM H = HIGH VH = VERY HIGH

Sample ID	Sulfur S ppm	Zinc Zn ppm	Manganese Mn ppm	Iron Fe ppm	Copper Cu ppm	Boron B ppm	Soluble Salts mmhos/cm	Nitrate NO3-N ppm	Ammonium NH4-N ppm	Bicarb P ppm					Comments



F10190-0059

Account No.

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**QUALITY ANALYSES FOR INFORMED DECISIONS**

To: **Exemption 6 DAIRY LLC**  
**Exemption 6**  
 WESTON, OH 43569

For: **Exemption 6**

Field: 7

P.O. NUMBER: 190-0059

Date Received: 07/09/2010

Date Reported: 07/13/2010

**SOIL TEST REPORT**

Page: 1 of 1

Sample ID	Lab Number	Organic Matter %	Phosphorus		Potassium K ppm	Magnesium Mg ppm	Calcium Ca ppm	Sodium Na ppm	pH		Cation Exchange Capacity meq/100g	Percent Base Saturation				
			Available P ppm-P	Gray P2 ppm-P					Soil pH	Buffer pH		% K	% Mg	% Ca	% H	% Na
A	17345	4.3	33 H		137 M	235 M	1550 M		5.7	6.7	13.7	2.6	14.3	56.7	26.4	
B	17346	3.5	38 H		163 H	225 M	1450 L		5.6	6.6	14.3	2.9	13.1	50.5	33.5	

VL = VERY LOW L = LOW M = MEDIUM H = HIGH VH = VERY HIGH

Sample ID	Sulfur S ppm	Zinc Zn ppm	Manganese Mn ppm	Iron Fe ppm	Copper Cu ppm	Boron B ppm	Soluble Salts mmhos/cm	Nitrate NO3-N ppm	Ammonium NH4-N ppm	Bicarb-P H ppm					Comments

Account No.  
54540

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QUALITY ANALYSES FOR INFORMED DECISIONS®

To: Exemption 6 DAIRY  
Exemption 6  
WESTON, OH 43569-9694

For: **Exemption 6**

Field: 17

Date Received: 11/09/2010

Date Reported: 11/12/2010

# SOIL TEST REPORT

Page: 1 of 1

Sample ID	Lab Number	Organic Matter %	Phosphorus		Potassium K ppm	Magnesium Mg ppm	Calcium Ca ppm	Sodium Na ppm	pH		Cation Exchange Capacity meq/100g	Percent Base Saturation				
			Available P ppm-P	Bray P2 ppm-P					Soil pH	Buffer pH		% K	% Mg	% Ca	% H	% Na
A	13471	3.5	41 <i>H</i>		143 <i>M</i>	335 <i>H</i>	1900 <i>M</i>		6.1	6.7	16.3	2.3	17.2	58.4	22.1	
B	13472	3.3	51 <i>VH</i>		150 <i>M</i>	265 <i>M</i>	1600 <i>L</i>		5.6	6.6	15.4	2.5	14.3	52.0	31.2	
C	13475	2.8	58 <i>VH</i>		116 <i>M</i>	195 <i>H</i>	1050 <i>L</i>		5.4	6.7	10.8	2.8	15.1	48.7	33.4	

VL = VERY LOW    L = LOW    M = MEDIUM    H = HIGH    VH = VERY HIGH

[illegible]

439

F10190-0060

Account No.

99990

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**QUALITY ANALYSES FOR INFORMED DECISIONS**

To: **Exemption 6** DAIRY LLC  
**Exemption 6**  
 WESTON, OH 43569

For: **Exemption 6**

Field: 19

P.O. NUMBER: 190-0060

Date Received: 07/09/2010

Date Reported: 07/13/2010

**SOIL TEST REPORT**

Page: 1 of 1

Sample ID	Lab Number	Organic Matter %	Phosphorus		Potassium K ppm	Magnesium Mg ppm	Calcium Ca ppm	Sodium Na ppm	pH		Cation Exchange Capacity meq/100g	Percent Base Saturation				
			Available P ppm-P	Bray P2 ppm-P					Soil pH	Buffer pH		% K	% Mg	% Ca	% H	% Na
A	17347	3.3	53 VH		123 M	275 VH	1000 M		6.3	6.9	8.8	3.6	26.0	56.8	13.6	
B	17348	2.3	68 VH		119 M	265 VH	1000 M		6.5	6.9	8.7	3.5	25.3	57.4	13.8	

VL = VERY LOW L = LOW M = MEDIUM H = HIGH VH = VERY HIGH

Sample ID	Sulfur S ppm	Zinc Zn ppm	Manganese Mn ppm	Iron Fe ppm	Copper Cu ppm	Boron B ppm	Soluble Salts mhos/cm	Nitrate NO3-N ppm	Ammonium NH4-N ppm	Dicarb P P ppm					Comments



F10287-0532

Account No.

54540

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**QUALITY ANALYSES FOR INFORMED DECISIONS**

To: **Exemption 6 DAIRY**  
**Exemption 6**  
 WESTON, OH 43569-9694

For: **Exemption 6**

Field: 23

Date Received: 10/12/2010

Date Reported: 10/16/2010

**SOIL TEST REPORT**

Page: 1 of 1

Sample ID	Lab Number	Organic Matter %	Phosphorus		Potassium K ppm	Magnesium Mg ppm	Calcium Ca ppm	Sodium Na ppm	pH		Cation Exchange Capacity meq/100g	Percent Base Saturation				
			Available P ppm-P	Gray P2 ppm-P					Soil pH	Buffer pH		% K	% Mg	% Ca	% H	% Na
A	70246	2.3	83 VH		176 H	260 VH	850 L		6.2	6.9	8.1	5.6	26.9	52.7	14.9	
B	70247	3.7	64 VH		240 H	375 H	1800 M		6.1	6.7	16.3	3.8	19.1	55.1	22.0	
C	70248	4.0	70 VH		232 H	345 H	1700 L		5.9	6.7	15.6	3.8	18.5	54.6	23.1	

VL = VERY LOW L = LOW M = MEDIUM H = HIGH VH = VERY HIGH

Sample ID	Sulfur S ppm	Zinc Zn ppm	Manganese Mn ppm	Iron Fe ppm	Copper Cu ppm	Boron B ppm	Soluble Salt mmhos/cm	Nitrate NO3-N ppm	Ammonium NH4-N ppm	Bicarb CO3 ppm					Comments

F10190-0063

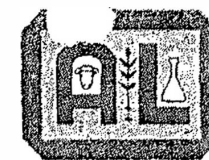
Account No.

99990

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**QUALITY ANALYSES FOR INFORMED DECISIONS**To: **Exemption 6** DAIRY LLC  
**Exemption 6**For: **Exemption 6**

Field: 58

P.O. NUMBER: 190-0063

Date Received: 07/09/2010

Date Reported: 07/13/2010

**SOIL TEST REPORT**

Page: 1 of 1

Sample ID	Lab Number	Organic Matter %	Phosphorus		Potassium K ppm	Magnesium Mg ppm	Calcium Ca ppm	Sodium Na ppm	pH		Cation Exchange Capacity meq/100g	Percent Base Saturation				
			Available P ppm-P	Bray P2 ppm-P					Soil pH	Buffer pH		%K	%Mg	%Ca	%H	%Na
A	17353	3.6	31 H		140 M	325 H	1400 M		6.3	6.9	11.3	3.2	24.0	62.1	10.7	
B	17354	3.3	29 M		127 M	305 H	1350 M		6.0	6.8	12.0	2.7	21.2	56.2	20.0	
			Average: 30													

VL = VERY LOW L = LOW M = MEDIUM H = HIGH VH = VERY HIGH

Sample ID	Sulfur S ppm	Zinc Zn ppm	Manganese Mn ppm	Iron Fe ppm	Copper Cu ppm	Boron B ppm	Soluble Salts mmhos/cm	Nitrate NO3-N ppm	Ammonium NH4-N ppm	Bicarb P P ppm					Comments



# Soil Analysis Report



Exemption 6

Exemption 6

Exemption 6

Exemption 6

Farm

BOWLING GREEN OH 43402

00111528 Exemption 6

Received: 26-Jul-11

Reported: 27-Jul-11

Lab Number:	1745	1746	1747	Exemption 6 748	Exemption 6 749
Field:	Exemption 6 1	Exemption 6 2	Exemption 6 3	Exemption 6 NE	Exemption 6 SE
Sample No:	Field 20A	1	2	3	4
C.E.C.	17.3	15.6	20.3	14.8	9.1
Org Matter	3.1	3.1	3.1	3.3	2.3
Soil pH	5.7 ↓	5.9 ↓	5.4 ↓	6.2	6.8
Lime Index	65	66	64	67	70
P lbs/ac	39	45	48	104	165
K lbs/ac	200 ↓	149 ↓	159 ↓	341	227 ↓
Ca lbs/ac	3670	3497	4273	3320	2669
Mg lbs/ac	451	454	535	601	516
SO4S lbs/ac					
B lbs/ac					
Cu lbs/ac					
Mn lbs/ac					
Zn lbs/ac					
Ca Sat'n.	53 %	56 %	53 %	56 %	73 %
Mg Sat'n.	11 %	12 %	11 %	17 %	23 %
K Sat'n.	2 %	1 %	1 %	3 %	3 %
Base Sat'n.	65 %	69 %	64 %	76 %	100 %
Ca/Mg	4.9	4.6	4.8	3.3	3.1
Mg/K	7.4	9.9	11.0	5.7	7.4
NO3N ppm					
Na lbs/ac					
Fe					
SS mS/cm					
Pct. Sand					
Pct. Silt					
Pct. Clay					
Texture					

optimum 40-69

optimum CEC 5 = 215-284 CEC 10 = 250-304 CEC 15 = 275-334 CEC 20 = 300-359

F10288-0176

Account No.

54540

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**QUALITY ANALYSES FOR INFORMED DECISIONS**

To: **Exemption 6** DAIRY  
**Exemption 6**  
 WESTON, OH 43569-9694

For: **Exemption 6**

Field: 61

Date Received: 10/12/2010

Date Reported: 10/18/2010

**SOIL TEST REPORT**

Page: 1 of 1

Sample ID	Lab Number	Organic Matter %	Phosphorus		Potassium K ppm	Magnesium Mg ppm	Calcium Ca ppm	Sodium Na ppm	pH		Cation Exchange Capacity meq/100g	Percent Base Saturation				
			Available P ppm	Bray P ppm					Soil pH	Buffer pH		%K	%Mg	%Ca	%H	%Na
A	75077	4.7	59 VH		329 VH	420 H	2100 M		7.1		14.8	5.7	23.6	70.7		
B	75078	4.9	54 VH		349 VH	415 H	2100 M		6.6	6.9	16.1	5.6	21.5	65.4	7.5	
C	75079	4.1	37 H		219 H	335 H	1750 M		6.2	6.8	14.5	3.9	19.2	60.3	16.5	
Average: 50																

VL = VERY LOW L = LOW M = MEDIUM H = HIGH VH = VERY HIGH

Sample ID	Sulfur S ppm	Zinc Zn ppm	Manganese Mn ppm	Iron Fe ppm	Copper Cu ppm	Boron B ppm	Soluble Silica mmol/kg	Nitrate NO3-N ppm	Ammonium NH4-N ppm	Fluoride F ppm					Comments

## **MANURE STORAGE OR TREATMENT FACILITY**

Manure Storage or Treatment Facility includes the following:

- Manure Storage Pond – earth impoundments or pits used to settle and store manure.
- Manure Treatment Lagoon – earth impoundments or pits that biologically treat manure.
- Fabricated Structures – engineered, man-made tanks of concrete, steel, fiberglass, plastic, timber, or other approved/designated materials (this also includes composting pads).

The following must be included in the Operating Record for the manure storage or treatment facilities:

1. Record the information at the top of the page for each manure storage pond, manure treatment lagoon, or fabricated structure. Include one page per each pond, lagoon, and structure. "Volume of Storage" should not include the freeboard volume. Your permit tells you the amount of freeboard required.
2. Record the inspection dates when you inspect each manure storage pond or manure treatment lagoon, depth of manure, remaining storage capacity, and date and amount of manure removed, and the time of year when you remove manure. For fabricated structures that do not have liquid manure (e.g., hi-rise poultry, pen pack), record inspection dates, approximate depth of manure, remaining storage capacity by percentage, approximate amount of manure removed, and the time of year when you remove manure.
3. Record the inspection dates as you inspect for cracks, animal damage, and seepages in and around a pond or lagoon. Record any structural damage to ponds, lagoons, or structures.
4. Record inspections of vegetation.
5. Record the inspections of storm water conveyances and any protective vegetative cover.
6. Under "Notes" be sure to record any corrective actions taken to repair or replace any damage, holes, cracks, etc. Routine mowing does not need to be recorded, but an ODA inspector will look for conditions that promote rodents, flies, or erosion. The inspection records must include, but are not limited to, the date, time, and results of the inspection, as well as any comments.

## MANURE STORAGE PONDS, MANURE TREATMENT LAGOONS, FABRICATED STRUCTURES WITH LIQUID MANURE (WEEKLY)

[illegible]



FORM 6: DISTRIBUTION AND UTILIZATION

**DISTRIBUTION AND UTILIZATION METHODS**

Maintain complete records of off-site distribution of manure for use by other than the permittee. Quantify manure transferred off-site for each twelve-month period (tons/gallons). The following information must be recorded using this Form or another form pre-approved by the ODA.

1. Quantity of nutrients managed via distribution and utilization:
2. Type of Distribution and Utilization
3. The date of the off-site transfer of manure:
4. The name of the recipient of manure:
5. Provide copies of the following Appendices to each recipient:
  - Appendix A – How to Use Appendices
  - Appendix A, Table 1 – Soils Prone to Flooding
  - Appendix A, Table 2 – Land Application Setbacks
  - Appendix B – Available Water Capacity Chart (for liquid manure)
  - Appendix F – The Most Limiting Nutrient Chart (all Appendices included on next pages).
6. Maintain copies of acknowledgements between the owner and operator of the facility and livestock manure brokers made pursuant to auctions or farm sales. Refer to Form 6A for an example acknowledgement form that could be used.

# DISTRIBUTION AND UTILIZATION RECORDS

Quantity (Tons, Gallons, Cubic Yards)	Date	Name and Address	Manure Analysis Given?  Y/N	Appendix A ~ Setbacks, Soils Prone to Flooding, and Most Limiting Nutrient Chart?  Y/N	Available Water Capacity (For Liquid Only)  Y/N	The Most Limiting Nutrient Chart  Y/N

Please note on a separate form any other practices such as manure management meetings, manure bills of sale, or other practices above and beyond rule requirements.

**ACKNOWLEDGEMENT FORM**

Date: \_\_\_\_\_

[name and address of permitted facility] \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

The seller, \_\_\_\_\_, agrees to transfer ownership of manure produced at their facilities in the amount of as desired, up to 100% [tons/gallons of manure] to \_\_\_\_\_, hereafter referred to as the recipient/broker, who agrees to accept all responsibility for handling, land application, or any further use of the manure transferred and in the recipient/broker's possession, as specified by any and all state laws governing the land application and any other such use of animal manure.

The recipient/broker acknowledges and shall adhere to the following:

"I have been provided with a copy of analytical results that list the nutrient content of the manure and total quantities of manure and copies of the applicable requirements of rule 901:10-2-14 of the Administrative Code. The manure will be distributed and utilized according to the best management practices and according to any state laws regulation these uses, as may be verified by site visits conducted by the soil and water conservation district or by inspections conducted by the Ohio department of agriculture."

\_\_\_\_\_  
Signed Name of Recipient/Broker

\_\_\_\_\_  
Date

\_\_\_\_\_  
Name of Recipient/Broker (Printed)

\_\_\_\_\_  
Address of Recipient/Broker

Check, if applicable. Recipient/Broker is:

- ☐ Certified Livestock Manager: \_\_\_\_\_ (Yes/No)
- ☐ Certified Livestock Manager Certificate Number: \_\_\_\_\_

APPENDICIES

## APPENDIX A – RULE 901:10-2-14: HOW TO USE THE APPENDICES TO THIS RULE

Refer to Appendix A, Tables 1 and 2 – Soils Prone to Flooding through Appendix F – Most Limiting Manure Application Rates of Rule 901:10-2-14 (OAC):

1. Determine if the site has soils that are prone to flooding and when the expected flooding seasons are (Appendix A, Table 1). Note that applications can only be made to soils prone to flooding at times outside the predicted flooding season. All applications to soils prone to flooding must be incorporated within 24 hours and must follow the setbacks in Appendix A, Table 2.
2. Determine if manure will be staged at the land application site. Any manure that is staged at the land application site shall meet the setbacks described in Column 1 of Appendix A, Table 2. For solid manure, manure that is staged for more than 15 days from initial delivery will be considered a stockpile, which shall also meet the setbacks described in Appendix A, Table 2. Stockpiles shall not discharge to surface waters of the State and may require additional management practices to prevent such a discharge.
3. For liquid manure applications, follow Appendix B, Available Water Capacity Chart, and Appendix F, Most Limiting Manure Application Rates Chart (Table 1 – Tiled Fields, Table 2 – Non-Tiled Fields). For solid manures, follow Appendix F, Most Limiting Manure Application Rates Chart.
4. Determine the nutrient removal for the expected cropping sequence using Appendix C, Tables 1 – 3. Determine residual nitrogen credits for the expected cropping sequence using Appendix C, Table 4.
5. Determine the nitrogen leaching potential of the field based on Appendix C, Table 5, Nitrogen Leaching Assessment Procedure. Note that all tiled fields have a high nitrogen leaching potential. High nitrogen leaching potential fields must have application rates less than or equal to 50 lb/ac as applied nitrogen (calculated by adding NH<sub>4</sub>-N to 1/3 Organic N) from June-October 1<sup>st</sup> UNLESS the field has a cover crop planted.
6. Use the current manure analysis and the relevant sections of Appendix C, Tables 6-7 to determine the amount of manure nutrients available for crop production.
7. Use Appendix E, Table 1 (P-Index) if the Bray P1 or equivalent value of the soil test is over 150 ppm.
8. Use Appendix F, Most Limiting Manure Application Rates Chart, Nitrogen, P<sub>2</sub>O<sub>5</sub>, K<sub>2</sub>O, Rate (tons or gallons per acre), or Available Water Capacity to *determine the application rate*. The selected application rate must be the most restrictive of the five "Limiting Application Rate Criteria" for each Field Situation & Time of Year.

Other Notes:

9. When using Appendix F, although not recommended, Phosphate manure application rates can be made between 250-500 lb/ac/yr in cases where liquid manure exceeds 60 lbs. P<sub>2</sub>O<sub>5</sub> per 1000 gallons or solid manure that exceed 80 lbs. P<sub>2</sub>O<sub>5</sub> per ton. The following criteria also apply: manure must be incorporated within 24 hours and no applications can be made on either frozen or snow covered ground or fields with soil tests over 100 ppm Bray P1; soil tests less than 40 ppm Bray P1 shall have no further P additions for 3 years; soil tests between 40-100 ppm Bray P1 shall have no further additions of P for 5 years; no other limiting criteria can be violated.

## APPENDICIES



10. When using **legumes** as a nitrogen removal source, the **maximum legume nitrogen removal must be less than or equal to 150 lbs./ac.**
11. When applying **liquid manure** to tiled fields, the **following criteria must be followed (except for growing crops):**
- a. Applications must be less than or equal to 0.5" or 13,576 gal/ac.
  - b. Use a tool (**AERWAY tool or similar tool**) that can disrupt/close (using horizontal fracturing) the preferential flow paths in the soil, OR **till the surface of the soil 3-5" deep to a seedbed condition** to soak up the liquid manure and keep it out of preferential flow channels.
  - c. If **injection** is used, it should only be deep enough to cover the manure with soil. **Till the soil at least 3" below the depth of injection prior to application.** Tillage prior to application will be considered incorporation of the manure.
  - d. The **outlets must be monitored** before, during, and after application AND **provisions planned to plug the tile or capture the tile flow if liquid manure reaches the tile outlets.** If **No-till or pastures** are used for applications, **tiles must be plugged.**
12. If manure is to be applied on **frozen or snow-covered ground**, the field must have **at least 90% surface residue cover (e.g., good quality hay or pasture field, all corn grain residue).** For applications to **frozen or snow-covered ground**, manure shall not be applied on more than 20 contiguous acres. Contiguous areas for application are to be separated by a break from streams, ditches, waterways, surface water, etc. (areas that present the least runoff potential and are furthest from surface water). The **setbacks in Column 3** must be followed. **Prior approval** must be obtained from the **ODA, Livestock Environmental Permitting Program** BEFORE frozen or snow/ice covered ground surface manure applications. If manure can be **incorporated within 24 hours on frozen ground**, approval from ODA, Livestock Environmental Permitting Program **is not** required.
13. For **surface manure applications**, follow the **setbacks in Column 2.** For **incorporation within 24 hours or injection**, follow the **setbacks in Column 4.**

APPENDICIES

**APPENDIX A, TABLE 1 – SOILS PRONE TO FLOODING**

<b>SOILS</b>	<b>MONTHS</b>	<b>COMMENT</b>
Abscota Variant	Feb-Jun	
Adrian	Nov-May	
Aetna	Dec-Jun	
Algansee	Nov-May	
Algiers	Nov-Jun	Frequently flooded
Algiers	Dec-Jun	Occasionally flooded
Alluvial land	Nov-Dec	Long duration
Alluvial land	Jan-Dec	Very long duration
Ashton	Dec-May	
Beaucoup	Mar-Jun	
Bonnie	Oct-Jun	
Brookston	Dec-May	
Carlisle	Nov-May	
Ceresco	Mar-May	
Chagrin	Nov-May	
Chavies	Nov-Mar	
Clifty	Nov-May	
Coblen	Nov-Jun	
Cohoctah	Nov-Apr	
Cuba	Jan-May	
Defiance	Jan-May	
Edwards	Sep-May	
Eel	Oct-Jun	
Eel Variant	Jan-May	
Elkinsville	Jan-Dec	
Euclid	Dec-Jun	
Fitchville	Dec-Jun	
Flatrock	Dec-Apr	
Flatrock, limestone substratum	Nov-Apr	
Fluvaquents	Nov-Jun	
Genesee	Oct-May	
Genesee Variant	Jan-May	
Gessie	Oct-May	
Glendora	Jan-Dec	
Grigsby	Dec-Apr	
Hackers	Jan-Apr	
Harrod	Nov-Jun	
Hartshorn	Nov-May	
Haymond	Dec-May	
Holly	Sep-May	Frequently flooded, very long duration
Holly	Nov-May	
Holton	Dec-Jun	
Huntington	Dec-May	
Joliet	Apr-Jun	
Jules	Mar-Jun	
Kerston	Mar-May	
Killbuck	Jan-Dec	

SOILS	MONTHS	COMMENT
Kinn	Dec-Apr	
Knoxdale	Dec-Apr	
Kyger	Nov-May	
Landes	Jan-Jun	
Landes Variant	Nov-Jun	
Lanier	Nov-Jun	
Latty	Jan-May	
Lenawee	Mar-May	
Lindside	Dec-Apr	
Linwood	Nov-Jun	
Lobdell	Jan-Apr	Frequently flooded
Lobdell	Nov-Apr	
Martinsville	Jan-Apr	
Martisco	Mar-Jun	
McGary Variant	Jan-Dec	
Medway	Nov-Jun	
Medway Variant	Nov-May	
Medway, limestone substratum	Nov-Dec	
Melvin	Sep-May	Frequently flooded, long duration
Melvin	Dec-May	
Mentor	Jan-Dec	
Millgrove	Nov-Jun	
Montgomery	Nov-May	
Moshannon	Dec-May	
Muskego	Nov-May	
Newark	Dec-Apr	
Newark Variant	Jan-Apr	
Nolin	Feb-May	
Nolin Variant	Feb-Apr	
Olentangy	Nov-Dec	
Orrville	Nov-May	
Otego	Nov-Dec	
Papakating	Nov-Jun	
Patton	Jan-Dec	
Peoga	Jan-Dec	
Pewamo	Mar-Apr	
Philo	Dec-May	
Piopolis	Mar-Jun	
Pope	Nov-Apr	
Rockmill	Sep-Jun	
Romeo	Mar-Jun	
Ross	Nov-Jun	
Rosburg	Nov-Jun	
Sarahsville	Dec-May	
Saranac	Nov-May	
Scioto	Nov-Jun	
Sebring	Nov-Jun	Occasionally flooded
Senecaville	Dec-Apr	
Shoals	Oct-Jun	
Shoals Variant	Nov-May	Used in Miami, Putnam, and Richland Counties
Shoals Variant	Oct-Jun	Used in Champaign County
Shoals, Till Substratum	Nov-Dec	



SOILS	MONTHS	COMMENT
Skidmore	Dec-May	
Sligo	Mar-Apr	
Sloan	Nov-Jun	
Sloan, Till Substratum	Nov-Dec	
Stanhope	Nov-Dec	
Stendal	Jan-May	
Stone	Nov-Jun	
Stonelick	Nov-Jun	
Stringley	Nov-Jun	
Taggart	Jan-Dec	
Tioga	Nov-May	
Tioga Variant	Jan-Apr	
Toledo	Nov-May	
Tremont	Jan-Dec	
Wabash	Nov-May	
Wabasha	Sep-Jun	
Wakeland	Jan-May	
Wallkill	Sep-Jun	
Wappinger	Jan-Dec	
Warsaw Variant	Jan-May	
Wayland	Nov-Jun	
Wick	Oct-Jun	
Wilbur	Oct-Jun	
Willette	Nov-Dec	
Zepernik	Nov-Jun	
Zipp	Dec-May	

## APPENDICIES

### APPENDIX A, TABLE 2 – LAND APPLICATION RESTRICTIONS

	1	2	3	4
APPENDIX A, TABLE 2 RULE 901:10-2-14 LAND APPLICATION RESTRICTIONS	STAGING AREAS AND STOCKPILES (10)	SURFACE APPLICATION	WINTER APPLICATIONS FROZEN OR SNOW- COVERED GROUND (1)	SURFACE INCORPORATION WITHIN 24 HRS OR DIRECT INJECTION
Class V Wells, Sinkholes	300'	300'	300'	100'
Surface Waters of the State (7)	300'	35' Veg. Cover, 100' (2)	35' Veg. Cover, 200' (8)	35' Veg. Cover, 100' (2)
Wells	300'	300'	300'	100'
Bedrock	> 3' from bedrock	None	None	None
Public Surface Drinking Water Intake	1500'	300'	300'	300'
Springs	300'	300'	300'	300'
Neighboring Residences	500'	300'	300'	100'
Flooding/Flood Plains/Floodways (3)	Do Not Stockpile	Do Not Apply	Do Not Apply	Permissible (3)
Slope (4)	0 – 6%	> 15%, See Note (5)	If > 6%, See Note (1)	> 15%, See Note (5)
Field Surface Furrows (6)	300'	35' Veg. cover, 100' (2) or 35' see note (9)	200'	None
Maximum Application Rate:	Liquid Manure –Appendix B (AWC Chart) & Appendix F (Most Limiting Nutrient Chart) Solid Manure –Appendix F (Most Limiting Nutrient Chart)			

**NOTE (1):** All winter surface applications must have prior approval from the Ohio Department of Agriculture. Application on frozen and snow-covered soil is not recommended. However, if manure application becomes necessary on frozen or snow-covered soils, only limited quantities of manure shall be applied to address waste storage limitations until non-frozen soils are available for manure application. If frozen or snow-covered ground application becomes necessary, applications are to be applied only if ALL the following criteria are met:

- Application rate is limited to 10 wet tons per acre for solid manure more than 50% moisture and 5 wet tons for manure less than 50% moisture. For Liquid manure, the application rate is limited to 5,000 gallons per acre.
- Applications are to be made on land with at least 90% surface residue cover (e.g., good quality hay or pasture field, all corn grain residue remaining after harvest, all wheat residue cover remaining after harvest).
- Manure shall not be applied on more than 20 contiguous acres. Contiguous areas for application are to be separated by a break of at least 200 feet. Utilize those areas for manure application that are furthest from streams, ditches, waterways, surface water, etc. (areas that present the least runoff potential and are furthest from surface water).
- Increase the application setback distance to 200 feet "minimum" from all grassed waterways, surface drainage ditches, streams, water bodies, and field surface furrows. This distance may need to be further increased due to local conditions.
- The rate of application shall not exceed the rates specified in Table 4 (Determining The Most Limiting Manure Application Rates) for winter application.
- Additional winter application criteria for fields with significant slopes more than 6%: Manure shall be applied in alternating strips 60 to 200 feet wide generally on the contour, or in the case of contour strips on the alternating strips.

**NOTE (2):** Either a 35' wide vegetative buffer strip must be present or a total setback of 100' must be maintained. As a compliance alternative, the concentrated animal feeding operation may demonstrate that a setback or buffer is not necessary because implementation of alternative conservation practices or field-specific conditions will provide pollutant reductions equivalent or better than the reductions that would be achieved by the one hundred foot setback or a thirty-five foot vegetative buffer. Buffer strip is defined in OAC 901:10-1-01©.

**NOTE (3):** No applications during expected flooding season as reported in Appendix A, Table 1.

**NOTE (4):** Must have less than 5 ton/ac yearly average soil loss to perform surface manure applications.

**NOTE (5):** Manures are not to be applied to cropland over 15% slope or to pastures/hay land over 20% slope unless ONE of the following precautions are taken:

- Immediate incorporation or injection with operations done on the contour, UNLESS the field has 80% ground cover (residue or canopy).
- Applications are timed during periods of lower runoff and/or rainfall (May 20<sup>th</sup> – October 15<sup>th</sup>).
- Split applications are made (separated by rainfall events) with single applications not exceeding 10 wet tons/ac or 5000 gal/ac.
- The field is established and managed in contour strips with alternated strips in grass or legumes.

**NOTE (6):** Applications can be through field surface furrows if criteria in Appendix A (How to Use Appendices) are followed.

**NOTE (7):** Refer to OAC 901:10-1-01 for the definition of "Surface waters of the state."

**NOTE (8):** The first setback refers to a vegetative buffer strip that must be maintained while the second refers to the total setback distance. Buffer strip is defined in OAC 901:10-1-01©.

**Note (9):** A 35' buffer without vegetation may be approved by the Director based on prior submittal of a compliance alternative for the specific land application area, in accordance with OAC 901:10-2-14©(3).

**Note (10):** Staging area(s) is a site used for placement of solid manure or transferring of liquid manure to facilitate land application. Any solid manure that is staged for more than 15 days will be considered a stockpile. Staging areas and stockpiles shall not discharge to waters of the State.

**Source: USDA-NRCS (2003). Field Office Technical Guide – Conservation Practice Standard, 633, Columbus, Ohio.**

## APPENDICIES

### APPENDIX B – AVAILABLE WATER CAPACITY (AWC)

This table shall be used to determine the AWC at the time of application and the liquid volume in gallons that can be applied not to exceed the AWC. To determine the AWC in the upper 8 inches use a soil probe or similar device to evaluate the soil to a depth of 8 inches. For land application, liquid manure application may also be calculated by converting acres per inch to gallons per acre. This conversion is based on the following formula: *1 acre – inch equals 27,156 gal/ac.*

Available Moisture in the Soil	Sands, Loamy Sands	Sandy Loam, Fine Sandy Loam	Very Fine Sandy Loam, Loam, Silt Loam, Silty Clay Loam	Sandy Clay, Silty Clay, Clay, Fine & Very Fine Textured Soils
< 25% Soil Moisture	Dry, loose and single-grained; flows through fingers.	Dry and loose; flows through fingers.	Powdery dry; in some places slightly crusted but breaks down easily into powder.	Hard, baked and cracked; has loose crumbs on surface in some places.
Amount to Reach AWC	20,000 gallons/ac	27,000 gallons/ac	40,000 gallons/ac	27,000 gallons/ac
25-50% or Less Soil Moisture	Appears to be dry; does not form a ball under pressure.	Appears to be dry; does not form a ball under pressure.	Somewhat crumbly but holds together under pressure.	Somewhat pliable; balls under pressure.
Amount to Reach AWC	15,000 gallons/ac	20,000 gallons/ac	30,000 gallons/ac	20,000 gallons/ac
50-75% Soil Moisture	Appears to be dry; does not form a ball under pressure.	Balls under pressure but seldom holds together.	Forms a ball under pressure; somewhat plastic; slicks slightly under pressure.	Forms a ball; ribbons out between thumb and forefinger.
Amount to Reach AWC	10,000 gallons/ac	13,000 gallons/ac	20,000 gallons/ac	13,000 gallons/ac
75% to Field Capacity	Sticks together slightly; may form a weak ball under pressure.	Forms a weak ball that breaks easily, does not stick.	Forms ball; very pliable; slicks readily if relatively high in clay.	Ribbons out between fingers easily; has a slick feeling.
Amount to Reach AWC	5,000 gallons/ac	7,000 gallons/ac	11,000 gallons/ac	7,000 gallons/ac
100% Field Capacity	On squeezing, no free water appears on soil, but wet outline of ball on hand.	On squeezing, no free water appears on soil, but wet outline of ball on hand.	On squeezing, no free water appears on soil, but wet outline of ball on hand.	On squeezing, no free water appears on soil, but wet outline of ball on hand.
Above Field Capacity	Free water appears when soil is bounced in hand.	Free water is released with kneading.	Free water can be squeezed out.	Puddles; free water forms on surface.

**Note: Liquid manure applications to tiled fields must be less than or equal to 13,576 gal/ac.**



# APPENDICIES

## APPENDIX F, TABLE 1 – MOST LIMITING MANURE APPLICATION RATES FOR TILED FIELDS

<b>Select the Most Limiting Application Rate Based on the Following Criteria</b>					
<b>Field Situation &amp; Time of Year</b>	<b>Limiting Application Rate Criteria</b>				
	<b>Nitrogen</b>	<b>P<sub>2</sub>O<sub>5</sub> 4/</b>	<b>K<sub>2</sub>O</b>	<b>Tons/Ac Gallons/Ac</b>	<b>AWC Table</b>
<b>Subsurface Drained (Tiled) Fields</b>					
(APR – JUN) Subsurface Drained or High N Leaching Potential	<b>1/</b> Crop Needs factoring N losses	Crop Needs or Crop Removal < 250 Lbs/ac	Crop Needs or Crop Removal < 500 Lbs/ac	13,000 gal/ac	Upper 8"
(APR – JUN) <b>Pasture &gt; 20% or Cropland &gt; 15%</b> Subsurface Drained or High N Leaching Potential	<b>1/</b> Crop Needs factoring N losses	Crop Needs or Crop Removal < 250 Lbs/ac	Crop Needs or Crop Removal < 500 Lbs/ac	<b>5/</b> 10 wet tons 5,000 gal/ac – unless contoured strips or incorporated immediately	Upper 8"
(JUL – SEP) <b>No Growing Crop</b> Subsurface Drained or High N Leaching Potential	<b>2/</b> 50 Lbs/ac as applied N	Crop Needs or Crop Removal < 250 Lbs/ac	Crop Needs or Crop Removal < 500 Lbs/ac	13,000 gal/ac	Upper 8"
(JUL – SEP) <b>With a Growing Cover Crop</b> Subsurface Drained or High N Leaching Potential	<b>3/</b> Next year's crop needs as applied N	Crop Needs or Crop Removal < 250 Lbs/ac	Crop Needs or Crop Removal < 500 Lbs/ac	13,000 gal/ac	Upper 8"
(JUL – SEP) <b>No Growing Crop, Cropland &gt; 15%</b> Subsurface Drained or High N Leaching Potential	<b>2/</b> 50 Lbs/ac as applied N	Crop Needs or Crop Removal < 250 Lbs/ac	Crop Needs or Crop Removal < 500 Lbs/ac	13,000 gal/ac	Upper 8"
(OCT – MAR) Subsurface Drained or High N Leaching Potential	<b>3/</b> Next year's crop needs as applied N	Crop Needs or Crop Removal < 250 Lbs/ac	Crop Needs or Crop Removal < 500 Lbs/ac	13,000 gal/ac	Upper 8"
(OCT – MAR) <b>Pasture &gt; 20% or Cropland &gt; 15%</b> Subsurface Drained or High N Leaching Potential	<b>3/</b> Next year's crop needs as applied N	Crop Needs or Crop Removal < 250 Lbs/ac	Crop Needs or Crop Removal < 500 Lbs/ac	<b>5/</b> 10 wet tons 5,000 gal/ac – unless contoured strips or incorporated immediately	Upper 8"
<b>Frozen or Snow-Cover</b> Subsurface Drained or High N Leaching Potential	<b>3/</b> Next year's crop needs as applied N	Crop Needs or Crop Removal < 250 Lbs/ac	Crop Needs or Crop Removal < 500 Lbs/ac	<b>5/</b> 10 wet tons < 50% solids, stockpile if > 50% solids, liquid manure 5,000 gal/ac	
<b>1/</b> Crop Needs factoring N losses – Maximum total nitrogen applied to meet the succeeding crop's recommended NITROGEN requirements for non-legume crops or 150 lbs/ac NITROGEN for the succeeding legume crop. <b>Considers loss of N through application method and time of year.</b>					
<b>2/</b> 50 lbs/ac as applied N – Nitrogen application limited to 50 lbs/ac based on the addition of the NH <sub>4</sub> or NH <sub>3</sub> (ammonium/ammonia) content of the manure + 1/3 of the organic nitrogen content the manure as applied. <b>Considers no losses due to application method or time of year.</b>					
<b>3/</b> Next year's crop needs as applied N – Maximum total nitrogen applied to meet the succeeding crop's recommended NITROGEN requirements for non-legume crops or 150 lbs/ac NITROGEN for the succeeding legume crop. <b>Considers no losses due to application method or time of year.</b>					
<b>4/</b> Under special conditions and criteria the rate of P <sub>2</sub> O <sub>5</sub> application can be increased to 500 lbs/ac (See Appendix A or Rule 901:10-2-14). <b>Frozen or Snow-covered ground and fields over 100 ppm Bray P1 soil test are exempt and are always limited to applications less than or equal to 250 lb/ac P<sub>2</sub>O<sub>5</sub>.</b>					
<b>5/</b> Wet tons refers to the weight of the manure as it is applied – include solids and moisture weight.					

## APPENDICIES

### APPENDIX F, TABLE 2 – MOST LIMITING MANURE APPLICATION RATES FOR NON-TILED FIELDS

Select the Most Limiting Application Rate Based on the Following Criteria					
Field Situation & Time of Year	Limiting Application Rate Criteria			Tons/Ac Gallons/Ac	AWC Table
	Nitrogen	P <sub>2</sub> O <sub>5</sub> 4/	K <sub>2</sub> O		
Non Subsurface Drained (Tiled) Fields					
(JUL – SEP) Not Subsurface Drained	1/ Crop Needs factoring N losses	Crop Needs or Crop Removal < 250 Lbs/ac	Crop Needs or Crop Removal < 500 Lbs/ac		Upper 8"
(OCT – MAR) Not Subsurface Drained	1/ Crop Needs factoring N losses	Crop Needs or Crop Removal < 250 Lbs/ac	Crop Needs or Crop Removal < 500 Lbs/ac		Upper 8"
(APR – JUN) Not Subsurface Drained Pasture > 20% or Cropland > 15%	1/ Crop Needs factoring N losses	Crop Needs or Crop Removal < 250 Lbs/ac	Crop Needs or Crop Removal < 500 Lbs/ac	5/ 10 wet tons 5,000 gal/ac – unless contoured strips or incorporate immediately	Upper 8"
(JUL – SEP) Not Subsurface Drained Pasture > 20% or Cropland > 15%	1/ Crop Needs factoring N losses	Crop Needs or Crop Removal < 250 Lbs/ac	Crop Needs or Crop Removal < 500 Lbs/ac		Upper 8"
Frozen or Snow-Cover Not Subsurface Drained	1/ Next year's crop Needs factoring N losses	Crop Needs or Crop Removal < 250 Lbs/ac	Crop Needs or Crop Removal < 500 Lbs/ac	5/ 10 wet tons < 50% solids, stockpile if > 50% solids, liquid manure 5,000 gal/ac	
(OCT – MAR) Not Subsurface Drained Pasture > 20% or Cropland > 15%	1/ Crop Needs factoring N losses	Crop Needs or Crop Removal < 250 Lbs/ac	Crop Needs or Crop Removal < 500 Lbs/ac	5/ 10 wet tons 5,000 gal/ac – unless contoured strips or incorporate immediately	Upper 8"
1/ Crop Needs factoring N losses – Maximum total nitrogen applied to meet the succeeding crop's recommended NITROGEN requirements for non-legume crops or 150 lbs/ac NITROGEN for the succeeding legume crop. <b>Considers loss of N through application method and time of year.</b>					
2/ 50 lbs/ac as applied N – Nitrogen application limited to 50 lbs/ac based on the addition of the NH <sub>4</sub> or NH <sub>3</sub> (ammonium/ammonia) content of the manure + 1/3 of the organic nitrogen content the manure as applied. <b>Considers no losses due to application method or time of year.</b>					
3/ Next year's crop needs as applied N – Maximum total nitrogen applied to meet the succeeding crop's recommended NITROGEN requirements for non-legume crops or 150 lbs/ac NITROGEN for the succeeding legume crop. <b>Considers no losses due to application method or time of year.</b>					
4/ Under special conditions and criteria the rate of P <sub>2</sub> O <sub>5</sub> application can be increased to 500 lbs/ac (See Appendix A or Rule 901:10-2-14). <b>Frozen or Snow-covered ground and fields over 100 ppm Bray P1 soil test are exempt and are always limited to applications less than or equal to 250 lb/ac P<sub>2</sub>O<sub>5</sub>.</b>					
5/ Wet tons refers to the weight of the manure as it is applied – include solids and moisture weight.					

## APPENDICES

### APPENDIX C, TABLE 6 – CALCULATING AVAILABLE NITROGEN OF MANURE

Use the following table to calculate available nitrogen based on time of year and type of application. Determine available nitrogen by multiplying the percent available for ammonia N and organic N and adding them together (i.e.,  $0.5 \times \text{NH}_4\text{N} + 0.33 \times \text{Organic N}$ ).

			ODA APPENDIX C, TABLE 6: METHOD OF CALCULATING N AVAILABILITY OF MANURES <sup>1</sup>			
Manure Applied	Manure Available Nitrogen	Poultry Manure Available Nitrogen	Available Nitrogen %		Time of Application	Days Until Incorporated <sup>2</sup>
TONS	POUNDS	POUNDS	NH <sub>4</sub>	ORGANIC	DATE	DAYS
			50	33	NOV – FEB	≤ 5
			25	33	NOV – FEB	> 5
			50	33	MAR – APR	≤ 3
			25	33	MAR – APR	> 3
			75	33	APR – JUN	≤ 1
			25	33	APR – JUN	> 1
			75	15	JUL – AUG	≤ 1
			25	15	JUL – AUG	> 1
			25	33	SEP – OCT	≤ 1
			15	33	SEP – OCT	> 1
			<sup>1</sup> The calculations are for all animal manures. It is assumed that 50% of the organic N in poultry manure is converted to NH <sub>4</sub> rapidly and is therefore included in the NH <sub>4</sub> column for calculating available N.			
			<sup>2</sup> Incorporation is the mixing of manure and soil in the tillage layer. Disking is usually enough tillage for conserving N availability.			

## FORM 7: LAND APPLICATION RECORDS

### **LAND APPLICATION RECORDS**

The forms provided for this section of the Operating Record are to record important information regarding different aspects of land application and to comply with Rule 901:10-2-16 of the OAC. An owner or operator may select other forms for use, provided the Director of Agriculture approves these.

**Determination of application rates.** Application rates shall follow the nutrient budget set forth in the Permit to Operate's Manure Management Plan and the restrictions contained in Rule 901:10-2-14 of the OAC. The permittee must amend the nutrient budget as necessary whenever the facility makes a change from the Manure Management Plan in how it manages the location, method, timing, or frequency of land application. If there are changes, the Nutrient Budget must account for these changes and the revised Nutrient Budget/Cropping schedule must be maintained in the operating record for the inspector's review.

#### **Projected and Actual Crop Yields (Form 7A)**

The projected crop yields for each field should already be set forth in the Total Nutrient Budget approved in the Manure Management Plan. If this projected or targeted yield would differ from the Plan, then this should be recorded on Form 7A. Upon completion of harvest, the actual yield for that field should be recorded on Form 7A or a similar type form for the inspector's review. Form 7A also allows the CAFF to record the future years cropping plan and yields where multi-year application of manure is planned.

LAND APPLICATION (Form 7B1, 7B2 or 7B3) – Any of these forms (7B1, 7B2 or 7B3) may be utilized to record appropriate information at the time of land application. In addition, an alternative form may be utilized provided it is approved prior to use the ODA-LEPP.

The following information must be documented:

**Sites.** List or describe specific sites that are used for land application of manure. This includes land that is owned and/or leased by the owner/operator and other land that the owner/operator applies manure on (i.e., land where the CAFF controls the application).

#### **Best management practices.**

1. Record all land application equipment that the owner or operator owns or has access to. This equipment must be properly maintained and not leak. Periodic inspections for leaks are required. Record the dates of inspections for leaks (see Form 2).
2. Record observations of the drain outlets for liquid manure flow during and after application of liquid manure to a land application site with subsurface drains.
3. Record the use of drain plugs or other devices when liquid manure is applied.
4. Record site inspections to inspect setbacks used to maintain vegetative cover and to protect stream channels or areas adjacent to stream channels, and as required by Rule 901:10-2-14 of the OAC.
5. Record the date, rate, quantity, and method of application of the nutrient, and/or form and source of manure, commercial fertilizer and/or other organic by-products.



6. Record total amount of nitrogen and phosphorus actually applied to each field, including documentation of calculations for the total amount applied.
7. Record the condition of the soil at the time of application including, but not limited to, available water capacity and evidence of soil cracks and related information on soil conditions. Refer to the Available Water Capacity Chart Appendix B of Rule 901:10-2-14 of the OAC for liquid manures.
8. Record the temperature conditions including weather conditions for 24 hours prior to manure application, at the time of the application, and for the 24 hours after application. Refer to Internet site: <http://www.uswx.com/us/wx/oh/> and determine the percent chance of rain listed in the hour-by-hour forecast. In the alternative, record the percent chance of rain or rain forecast published in your area in a newspaper of general circulation. List any publicized weather report on rainfall accumulation.
9. Record the implementation dates of those best management practices necessary to reduce the risk of nitrogen and phosphorus runoff by crop rotation, cover crops, or residue management. Refer to 901:10-2-14 of the OAC and several of the appendices to this rule for information on how to calculate the total amount of nitrogen and phosphorus to be applied to each field, how to calculate the rate of application, and how to comply with setbacks.

**LAND APPLICATION CROPPING SCHEDULE**

Soil Sample Taken*		Last Year's Crop:		This Year's Crop:		2 <sup>nd</sup> Year's Crop:		3 <sup>rd</sup> Year's Crop:	
Field ID/Year	Acres	Projected Yield	Actual Yield	Projected Yield	Actual Yield	Projected Yield	Actual Yield	Projected Yield	Actual Yield

1. The projected crop yield for each crop in each land application area shall be based on (a) soil productivity information; (b) historical yield data; (c) potential yield; or (d) combinations of yield data.
2. An additional 10 percent may be added to the potential and/or historical yields to account for improvements in management and technology.
3. When historical yield data is not available a realistic yield may be based on local research or on yields from similar soils and/or cropping systems in the area.
4. For new or potential crops or varieties, industry yield estimates may be used until actual yields are available for documentation in the operating record.
5. Attach the soil tests to this section of the Operating Record. **Be sure to identify each field per each sample taken. Identify the laboratory method used to analyze the manure, which must be Publication 221, "Recommended Chemical Soil Test Procedures for the North Central Region; Published by the North Central Regional Committee on Soil Testing and Plant Analysis (NCR-13), North Dakota Agricultural Experiment Station."**

# LAND APPLICATION FIELD INFORMATION FORM

[illegible]

## LAND APPLICATION FIELD INFORMATION FORM

[illegible]



FORM 7B3: LAND APPLICATION FIELD INFORMATION:

**LAND APPLICATION FIELD INFORMATION FORM**

Date:	Time Start:	Time Stop:	Applicator name:	
Facility:	Manure source: (storage structure)	Type of manure?	Species?	
Field ID:		Solid    Sand    Liquid	Poultry    Swine Dairy      Beef	
Method of Application: Spreader   Irrigation Tank        Dragline		Equipment Inspected and calibrated? Yes        No	Manure Incorporated? Yes        No	Date and type of Incorporation:
Total gallons or tons applied:	Application Rate Per Acre:	Total Acres Applied To:	Calculated Rate (gal/ac or tons/acre):	
Tile Checks –time/condition		Rate of P <sub>2</sub> O <sub>5</sub> Applied: Rate of N Applied:	Manure inspected and treated for insects? Yes    No    NA	
Current Crop:		Next Crop:		
Residue type and % cover:		Soil Saturation (% AWC):		
Soil Cracks Present? Tile Blowout Present?		Applied to frozen or snow covered ground? Yes                      No		
Date and Time of Most Recent Forecast (attach copy)		Problems or comments:		
Most recent Soil Test Values (provide units)		N - NA	P	K
Most recent Manure analysis (provide units):		N	P	K
Commercial Fertilizer Applied		N	P	K
Actual precipitation after application.	Day 1 (manure app. day)	Day 2 Date:	Day 3 Date:	Day 4 Date:
Day 5 Date:				
Setbacks are equal or greater than restrictions in Appendix A, Table 2 to rule 901:10-2-14    Yes                      No				

Attach or draw field maps below with setbacks shown:

FORM 9: MORTALITY MANAGEMENT PLAN

## MORTALITY MANAGEMENT PLAN RECORD

Disposal methods for mortality must comply with Rule 901:10-2-15 of the OAC and the Mortality Management Plan in the Permit to Operate. Use this form or another form pre-approved by the Director to record the following information:

1. The dates and times of inspection of each building.
2. The number of dead animals removed from each building.
3. The best management practices used to implement the proper and appropriate disposal of dead livestock.

## MORTALITY MANAGEMENT RECORD

### Disposal Method:

Date	Location of Disposal (i.e.: of landfill/rendering/etc)	Number Dead	Date	Location of Disposal (i.e.: of landfill/rendering/etc)	Number Dead

### Disposal Methods for Mortalities:

B = Burial on site; I = Incineration; R = Render; L = Landfill; C = Compost

## EMERGENCY SPILL REPORT FORM

(OAC 901:10-2-16(A)(1)(a)(xii) and 901:10-2-17)

**IN THE EVENT OF A DISCHARGE OR MANURE SPILLAGE, THE OWNER OR OPERATOR SHALL CONTACT THE OHIO DEPARTMENT OF AGRICULTURE BY TELEPHONE AS SOON AS POSSIBLE, BUT IN NO CASE MORE THAN TWENTY-FOUR HOURS FOLLOWING FIRST KNOWLEDGE OF THE OCCURRENCE. USE THE CONTACT INFORMATION CONTAINED IN THE FACILITY'S EMERGENCY RESPONSE PLAN.**

**THE PERSON REPORTING THE DISCHARGE SHALL SUPPLY THE FOLLOWING INFORMATION TO THE OHIO DEPARTMENT OF AGRICULTURE:**

1. List the times at which the discharge or manure spill occurred and was discovered.
2. List the approximate amount and the characteristics of the discharge or manure spillage.
3. If applicable list the waters of the State affected by the discharge or spillage.
4. List the circumstances which created the discharge or spillage.
5. List the names and phone numbers of persons who have knowledge of these circumstances.
6. List the steps taken to clean up the discharge or spillage.
7. List the names and telephone numbers of persons responsible for the cleanup.
8. Provide all Land Application Records that are relevant to the application period in which the spill occurred. These records should also show any weather reports and rainfall events that may have contributed to the spill or discharge.

IN ADDITION, THE OWNER OR OPERATOR SHALL ALSO FILE A WRITTEN REPORT OF THE OCCURRENCE IN LETTER FORM WITHIN FIVE DAYS FOLLOWING FIRST KNOWLEDGE OF THE OCCURRENCE, UNLESS OTHERWISE WAIVED BY THE DIRECTOR. THIS INFORMATION SHALL ALSO BE KEPT IN THE OPERATING RECORD (A form is provided below). THIS REPORT SHALL OUTLINE THE ACTIONS TAKEN OR PROPOSED TO BE TAKEN TO CORRECT THE PROBLEM AND TO ENSURE THAT THE PROBLEM DOES NOT RE-OCCUR. SEE 901:10-2-17(A)(4)(d).

(The written report shall be sent to the following address: Ohio Department of Agriculture, Livestock Environmental Permitting Program, 8995 East Main Street, Reynoldsburg, Ohio 43068.)

FORM 12: EMERGENCY SPILL REPORT FORM CONTINUED

<b>NAME OF FACILITY:</b>	
<b>DATE AND TIME OF DISCHARGE/SPILL<sup>1</sup>:</b>	
<b>DATE AND TIME DISCHARGE/SPILL DETECTED:</b>	
<b>AMOUNT<sup>2</sup>:</b>	
<b>CHARACTERISTICS OF THE DISCHARGE OR MANURE SPILLAGE<sup>3</sup></b>	
<b>LOCATION/WATER WAY AFFECTED<sup>4</sup>:</b>	
<b>SPILL OCCURRED BECAUSE:</b>	
<b>NAMES/PHONE NUMBERS OF PERSONS WITH KNOWLEDGE OF SPILL</b>	
<b>AGENCIES CONTACTED:</b>	
<b>EQUIPMENT USED:</b>	
<b>STEPS TAKEN TO CONTAIN AND REMEDIATE THE SPILL:</b>	



<b>NAMES/PHONE NUMBERS OF PERSONS RESPONSIBLE FOR THE CLEANUP</b>	
<b>ACTIONS TAKEN/TO BE TAKEN TO ENSURE PROBLEM DOES NOT RE-OCCUR</b>	

Date report sent to Ohio Department of Agriculture: \_\_\_\_\_

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Name (printed)

<sup>1</sup> **Time:** The time of the discharge or manure spill. If the discharge or spill was detected after it happened, give an estimate of the time when the discharge or spill occurred.

<sup>2</sup> **Amount:** Give an estimate of the number of gallons or tons of manure, litter, or process wastewater discharged. The date, time, and approximate volume of any discharge from the production area shall also be filed in the annual report.

<sup>3</sup> **Characteristics:** Provide other relevant information about the discharge, including the source, cause, composition (e.g., emergency overflow of process wastewater from lagoon #2), and impacts observed (e.g., fish kill in water body).

<sup>4</sup> **Location:** The location of any discharge to waters of the State. Be specific. Include the name of the water body, and a specific description of where the manure, litter, or process wastewater entered the water body. Include landmarks or other points of reference (e.g., Three Mile Creek, at southeast corner of feedlot where creek bends to the west).

Socha, Julianne

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**From:** richard.bouder@epa.ohio.gov  
**Sent:** Wednesday, December 07, 2016 9:57 AM  
**To:** [Exemption 6]  
**Subject:** RE: Follow-up Complaint re: [Exemption 6] Land Company  
**Attachments:** [Exemption 6] 2.pdf

**Follow Up Flag:** Follow up  
**Flag Status:** Flagged

Second and final email.

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**From:** Bouder, Richard  
**Sent:** Wednesday, November 02, 2016 9:13 AM  
**To:** [Exemption 6] [Exemption 6]  
**Subject:** RE: Follow-up Complaint re: [Exemption 6] Land Company

No problem [Exemption 6]! Yes, I did receive your request from 10/17 and am waiting for a reply from the Division of Surface Water. I'll contact you as soon as I receive a response back.

Thanks!  
Rich

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**From:** [Exemption 6] [Exemption 6]  
**Sent:** Tuesday, November 01, 2016 11:25 PM  
**To:** Bouder, Richard <[richard.bouder@epa.ohio.gov](mailto:richard.bouder@epa.ohio.gov)>  
**Subject:** RE: Follow-up Complaint re: [Exemption 6] Land Company

Hi Richard,

Thanks so much for your reply. I do have another public records request pending from October 17<sup>th</sup>. Please let me know if it wasn't forwarded to you.

I appreciate all your help!

[Exemption 6]

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**From:** [richard.bouder@epa.ohio.gov](mailto:richard.bouder@epa.ohio.gov) [<mailto:richard.bouder@epa.ohio.gov>]  
**Sent:** Monday, October 31, 2016 11:43 AM  
**To:** [darla.peelle@epa.ohio.gov](mailto:darla.peelle@epa.ohio.gov); [Exemption 6]  
**Cc:** [Rick.Wilson@epa.ohio.gov](mailto:Rick.Wilson@epa.ohio.gov); [web.requests@epa.ohio.gov](mailto:web.requests@epa.ohio.gov)  
**Subject:** RE: Follow-up Complaint re: [Exemption 6] Land Company

Good morning [Exemption 6]

I checked with the Division of Surface Water and we do not have any records in response to your request below for up-to-date soil sample/manure analyses documents.

Please let me know if you need any additional information.

Thank you,

Richard Boudier  
Public Records Manager  
Ohio Environmental Protection Agency  
Office of the Director  
Lazarus Government Center  
P.O. Box 1049  
Columbus, Ohio 43216-1049  
(614) 644-2782  
[richard.boudier@epa.ohio.gov](mailto:richard.boudier@epa.ohio.gov)

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**From:** Peelle, Darla  
**Sent:** Friday, October 28, 2016 9:50 AM  
**To:** Exemption 6  
**Cc:** Wilson, Rick <[Rick.Wilson@epa.ohio.gov](mailto:Rick.Wilson@epa.ohio.gov)>; EPA Web Requests <[web.requests@epa.ohio.gov](mailto:web.requests@epa.ohio.gov)>; Tebbe, Patricia <[patricia.tebbe@epa.ohio.gov](mailto:patricia.tebbe@epa.ohio.gov)>; Boudier, Richard <[richard.boudier@epa.ohio.gov](mailto:richard.boudier@epa.ohio.gov)>  
**Subject:** RE: Follow-up Complaint re: Exemption 6 Land Company  
**Importance:** High

Good morning, Exemption 6 –

Thank you for letting us know about Exemption 6 experience. I tried to reach him this morning, but my call went to voicemail, so I left a message that included an apology and my contact information. I'm sorry Exemption 6 felt his concerns were dismissed. I don't know who he may have spoken with, but to the best of my knowledge it wasn't the Public Interest Center where I work, and Pat Tebbe also let me know that she didn't receive a call from him.

I have forwarded Exemption 6 complaint to Rick Wilson in the Division of Surface Water in Ohio EPA's Central Office, here in Columbus. As you know, most CAFO issues are regulated by the Ohio Department of Agriculture, but Rick is still Ohio EPA's contact for those concerns under our authority.

Please keep in mind that I am always available as Ohio EPA's point of contact for northwest Ohio and I'm happy to provide assistance at any time. I'll be sure to let Exemption 6 know this when he returns my call. If I can provide further assistance, please don't hesitate to contact me directly.

Best regards,

*Darla*

Darla L. Peelle  
Ohio EPA | Public Involvement Coordinator  
Northwest and Southwest District Offices  
Phone: (614) 644-2160  
Fax: (614) 644-3727  
[www.epa.ohio.gov](http://www.epa.ohio.gov)



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**From:** Exemption 6 Exemption 6  
**Sent:** Thursday, October 27, 2016 8:44 PM  
**To:** EPA Web Requests <[web.requests@epa.ohio.gov](mailto:web.requests@epa.ohio.gov)>  
**Cc:** Tebbe, Patricia <[patricia.tebbe@epa.ohio.gov](mailto:patricia.tebbe@epa.ohio.gov)>; 'Batey, Benjamin' <[BBatey@co.wood.oh.us](mailto:BBatey@co.wood.oh.us)>  
**Subject:** Follow-up Complaint re: Exemption 6 Land Company

To Whom It May Concern:

I just received a call from Exemption 6, Exemption 6, Weston, OH – Exemption 6. He said he tried to submit a complaint and/or a request an investigation yesterday into what he believed to be unlawful land applications of manure by the Exemption 6 Land Company in Wood County. Exemption 6 said they were applying manure sludge quite heavily last Wednesday the day before that area received over 1" of rain on Thursday. Exemption 6 said he spoke with Ohio EPA employees, but did not receive a definitive answer and felt like his concerns were dismissed.

- Would someone please investigate Exemption 6 complaint? You can reach him at the phone number above if there is no record of his call.

Please see the attached 2012 Ohio EPA Inspection Report for the Exemption 6 Dairy – now the Exemption 6 Land Company. This Report specifically states on page 3 that no manure was supposed to be applied unless up-to-date soil samples and manure analyses are obtained. I regularly submit requests for the Exemption 6 Dairy/Dairy Acquisition 1/Exemption 6 Dairy/Exemption 6 Land Company public records, however, I don't believe I have ever received copies of up-to-date soil samples or manure analyses. I also have a copy of a December 2015 Director's Final Findings and Orders that "noted the lack of a Manure Management Plan ("MMP") for the Facility, as required by the NPDES permit."

- Would someone please investigate IF Exemption 6 has submitted up-to-date soil and samples or manure analyses. If so, would you please send me copies under Ohio's Public Records Laws?
- Would someone also investigate how this NPDES-permitted CAFO can operate without a valid Manure Management Plan as required by the NPDES permit?

I appreciate your assistance with my concerns.  
Respectfully,

Exemption 6  
Exemption 6  
Cygnet, OH 43413  
Exemption 6  
Exemption 6



July 24, 2016

Director Craig W. Butler  
Ohio Environmental Protection Agency  
50 West Town Street, Suite 700  
Columbus, Ohio 43215

CERTIFIED MAIL

**Verified Complaint** against Exemption 6 Land Company LLC  
Exemption 6  
Weston, Ohio 43569

RE: Ohio EPA NPDES Permit No: 21K00023\*BD

Dear Director Butler:

As authorized under Ohio Law, I am submitting for your prompt review and enforcement this Verified Complaint on my behalf and also on behalf of Exemption 6. We are asking the Ohio Environmental Protection Agency (OEPA) to investigate alleged violations of NPDES regulations detailed herein regarding the above-named NPDES-permitted dairy in Wood County.

Exemption 6 Land Company, LLC [Dairy], fka Exemption 6 Dairy, is located on Exemption 6, near Weston, Ohio, in Liberty Township, Wood County and is in the Lower Maumee Watershed. The nearest stream to the facility is an unnamed tributary of West Branch Tontogany Creek. The subsequent stream network includes Tontogany Creek, Maumee River, and ultimately to Lake Erie. According to the September 2004 Findings of Violation by the EPA – "pollutants discharged from the production area...would eventually reach Lake Erie." Also, the Tontogany Creek flows into the Maumee River just upstream from the intake for the Bowling Green City Water Treatment Plant.

This Complaint alleges: 1) Exemption 6 Land Company has an NPDES Permit with no valid manure management plan in violation of the OEPA NPDES permit program, and 2) this owner was applying manure on a field at the southwest corner of Exemption 6 yesterday in violation of OEPA orders.

**BACKGROUND** – Exemption 6 opened Exemption 6 Dairy LLC approximately 14 years ago with Exemption 6 cows.

- The OEPA issued a Discharge Violation letter on August 16, 2004; however, OEPA did not actually approve the NPDES Permit for this Dairy until 2011. AgStar Financial Services, PCA foreclosed on Exemption 6 Dairy and the Exemption 6 abandoned this facility soon thereafter.
- The Ohio Department of Agriculture approved a state permit to expand to Exemption 6 dairy cows in July 2007.
- Dairy Acquisition 1 LLC was formed in 2011 by an AgStar member and this LLC became the owner of Exemption 6 Dairy in July 2011. The NPDES Permit was transferred to Dairy Acquisition 1 LLC in late 2011.
- The OEPA approved a transfer of the NPDES Permit from Dairy Acquisition 1 LLC to Exemption 6 in July 2012 as operators of the Exemption 6 Dairy but Dairy Acquisition 1 LLC remained the owner of the facility. Exemption 6 removed his livestock from this facility in March 2014 after being charged with several serious violations.
- Dairy Acquisition 1 LLC sold this Dairy to Exemption 6 Land Company LLC in August 2014.

**MANURE MANAGEMENT PLAN** – According to the NPDES Permit available on the OEPA website – "(2) As soon as possible but no later than January 19, 2012, Exemption 6 Dairy LLC shall begin development of an updated Manure Management Plan which meets the requirements of the 2008 Federal CAFO Rule and this permit. It is acceptable to develop the Manure Management Plan which would be included as part of a renewal of the Permit-to-Operate issued to Exemption 6 Dairy LLC by the Ohio Department of Agriculture."

According to the public documents listed on the attached timeline, none of the subsequent owners/operators of this Dairy has ever submitted an "updated Manure Management Plan which meets the requirements of the 2008 Federal CAFO Rule." In addition, the ODA permit and MMP expired in 2012 plus this MMP was for Exemption 6 cows so it was never relevant for this Exemption 6-head dairy. According to my public records requests for copies of an updated MMP - the OEPA has no records responsive to my request.

**EPA COMPLIANCE EVALUATION INSPECTION REPORT** - On January 23, 2013, EPA sent a Compliance Evaluation Inspection Report to Exemption 6 because records were not maintained on site - e.g. weekly operating levels of manure storage facilities and representative soil samples of the manure land application fields. EPA also noted "It appears that a new Manure Management Plan (MMP) has not yet been developed for the site and it appears that you may not have manure distribution agreements with local landowners. No records of manure analyses or soil samples for land application fields were available at the dairy at the time of the inspection."

Most importantly, this Inspection Report stated - "No manure should be applied to any fields unless up-to-date soil samples and manure analyses are obtained." It is incomprehensible that these orders could be ignored merely because OEPA transferred the NPDES Permit to yet another owner/operator.

**CONCLUSION** - Exemption 6 and I request that OEPA initiate an investigation into the serious issues alleged in this Complaint and bring appropriate enforcement proceedings - including the immediate stoppage of all future manure applications. This facility presents an imminent threat to Lake Erie and to public health.

Thank you in advance for your prompt attention and resolution of this Complaint. Exemption 6 and I are prepared to assist you and your employees with the expeditious resolution of the issues in this Verified Complaint and will provide you with any additional information you may require. We also request that you periodically advise us of your Agency's progress in resolving this matter.

The undersigned, being first duly sworn and cautioned, state that the facts and allegations of the above complaint are true to the best of our knowledge.

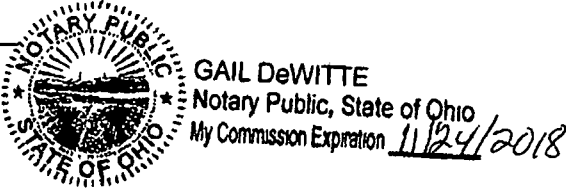
Signed: **Exemption 6**  
Exemption 6  
Exemption 6  
Cygnet, Ohio 43413

Signed: **Exemption 6**  
Exemption 6  
Weston, Ohio 43569  
Exemption 6

**Notary Verification**

On July 25th, 2016, the above-named individuals, Exemption 6 and Exemption 6, appeared before me and, after being duly cautioned and sworn, acknowledged before me that the information above is true and correct and that they affixed their true signatures hereto.

Notary Public Gail DeWitte  
My Commission Expires 11/24/2018



cc: Wood County Commissioners  
Cheryl Burdett, Region 5 CAFO Program Manager  
Barbara VanTil-, US EPA Chief, Water Enforcement and Compliance Assurance Branch

Exemption 6  
Exemption 6  
Cygnet, Ohio 43413  
Exemption 6

June 28, 2016

Ms. Cathy Alexander, Water Quality Manager  
Ohio Environmental Protection Agency  
P.O. Box 1049  
Columbus, Ohio 43216-1049

RE: Exemption 6 Land Company LLC (fka Exemption 6 Dairy LLC) NPDES Permit

Dear Cathy,

The purpose of this letter is to request your investigation into the Exemption 6 Land Company LLC NPDES Permit, fka Exemption 6 Dairy, Dairy Acquisition 1, and Exemption 6 Dairy. I am sure you deal with many problem permit situations but this particular Permit has a long history of unresolved problems. In addition to several owner/operators, this Dairy has had numerous violations. According to the Permit, the MMP was not created in accordance with the conditions of the permit and has never met the requirements of the 2008 Federal CAFO Rule yet it has been transferred to various owners/operators over the past five years.

Attached is a timeline I drafted from public records obtained from your Office, U.S. EPA, and other sources. As you know, Exemption 6 and I submitted a Verified Complaint two years ago regarding this Dairy. After I received the Proposed Administrative Orders in October 2015, I emailed Ohio EPA attorney Peter Simcic questioning several issues in the Complaint that were not addressed. However, the Director issued his Final Findings and Orders in December 2015 and he only addressed the winter application issue. Therefore I would respectfully ask you to investigate the following unresolved issues:

1. NO VALID MMP - November 13, 2015 - Please see the attached email stream with Ohio EPA Richard Boudier in response to my public records request for a copy of the updated MMP. He replied that "I checked with our Division of Surface Water again and they indicated **they do not have any records in response to your request.**" Cathy, I'm sure you agree it is totally unacceptable that this NPDES-permitted facility has never had a valid MMP/NMP. Your CAFO NPDES permit application states that three forms must be completed and submitted "with a complete manure management plan." Your Office accepted the MMP in the ODA PTO in 2009 even though it was for Exemption 6 cows - but Exemption 6 Dairy never expanded so this ODA MMP was never relevant for the Exemption 6 head Dairy plus it has expired. How can this CAFO have an NPDES Permit with no NMP/MMP?
2. OHIO EPA ORDERS - August 29, 2012, Ohio EPA letter - "**No manure should be applied to any fields unless up-to-date soil samples and manure analyses are obtained.**" There are numerous documents listed in the attached timeline stating that the Exemption 6 Dairy has never had a valid Manure Management Plan (MMP) that "is created in accordance with this permit and which meets the requirements of the 2008 Federal CAFO Rule." Please check, but as far as I can tell, there have been no updated soil samples or manure analyses submitted to Ohio EPA - at least these records were not made available in response to my public records requests. Nevertheless, owners/operators have been spreading manure for years. This seems to violate the conditions in the August 2012 Ohio EPA order. I have pictures of them spreading last year if you need evidence.

To make matters even worse, it appears **Exemption 6** Land Company is currently installing a travelling pivot manure irrigator in the field directly south of the Dairy site. This would unquestionably violate the conditions of your August 2012 Order and could pose a new health threat to local residents. I have pictures of this current construction if you cannot get an inspector to come to the site. Is anyone from Ohio EPA monitoring this operation to make sure they are not applying manure?

3. CLOSURE VIOLATIONS - August 11, 2011, attached Ohio EPA email stating "It has been our experience that bankrupt dairies are sold relatively quickly. So, we tend to give some flexibility in terms of closure requirements but the other requirements of the NPDES permits remain in effect." Cathy, according to the Wood County Recorder's Office, **this dairy was not actually sold until July 2014**. The bank foreclosed on **Exemption 6** in July 2011 so that means the bank still owned it for three years. Therefore, it was not "**sold** relatively quickly" - although there have been other subsequent "operators". Please investigate to determine the legality of allowing the NPDES closure regulations to be totally ignored for three years, especially since much of the manure from before **Exemption 6** Dairy closed remains in the manure lagoon five years later.
4. WATER WELL TESTING. Although Health Departments have duties under the Ohio Revised Code to abate nuisances, they cannot do their jobs because NPDES Permits lack any information about the locations of the manure application fields. The Clean Water Act repeatedly mandates "field-specific" and "site-specific" information in the NMP/MMP.

According to the ODA PPT presentation at the public hearing prior to permit approval - they approved the existing manure pond even though it violated their regulation that required 15 feet of low permeable material from the aquifer to the bottom of the pond. ODA admitted in the PPT that the approximate separation distance from the ponds amounted to only 8.5 feet of low permeable material.

Ohio Health Departments also have duties to abate "a nuisance caused by defiling a well or body of running water." The fka **Exemption 6** Dairy manure pond has contained untreated animal waste for the past 14 years. Attached is an article published by the National Farmers Union in which they claim clay liners in CAFO manure lagoons can seep millions of gallons of wastewater into the soil each year and contaminate drinking water supplies. The Health Department tested dozens of water wells for residents who lived in the vicinity of the Dairy and /or the manure fields back in 2001. Unfortunately, they lack the funding to do follow-up testing at this time. Since Ohio EPA has allowed this Dairy to remain in operation despite being in violation of its NPDES permit, would Ohio EPA conduct follow-up water well testing?

Also, I've spoken with some of the local residents and they are very troubled about what could happen should there be unsafe levels of contaminants in their well water. Would Ohio EPA investigate and take required corrective actions to determine if the Dairy has contaminated nearby wells and, if so, remediate this situation?

5. It appears the **Exemption 6** Land Company LLC NPDES Permit available on the Ohio EPA website expired in February 2015. How could this Permit expire since all the manure that was generated before **Exemption 6** Dairy was closed was never properly disposed of and the manure storage facility was never properly closed?
6. Has **Exemption 6** paid his civil penalty?



7. As you know, U.S. EPA has never approved the ODA's application for the transfer of NPDES CAFO authority. According to Ohio EPA Melinda Harris' June 2005 letter, "The ODA review and approval process of the plans for the state program cannot be counted for the requirements of the federal program because ODA is not the authorized NPDES permitting authority, and because the plans developed according to ODA's rules...do not meet the minimum requirements of the NPDES requirements." Has Ohio EPA allowed CAFOs to incorporate ODA MMPs in the other 42 approved NPDES Permits and if so, how do you justify this in light of Ms. Harris' clear directive?
8. Ohio's CAFO/AFO Program Summary states that "Every operation with a NPDES or state permit must develop and implement a site-specific manure management plan (MMP)." Many/most ODA MMPs now utilize the Distribution & Utilization method of manure management. D&U MMPs contain little, if any, site-specific data. To be clear, manure application fields are no longer identified in ODA MMPs, there are no soil tests, no cropping schedules, plus there is no "nutrient management plan based on a field-specific assessment of the potential for nitrogen and phosphorus transport from the field and that addresses the form, source, amount, timing, and method of application of nutrients on each field to achieve realistic production goals, while minimizing nitrogen and phosphorus movement to surface waters"- as clearly required by the Clean Water Act. Please explain how Ohio EPA can incorporate ODA MMPs that utilize D&U in federal NPDES Permits that require a site-specific MMP.
9. Have other Ohio EPA NPDES Permits had problems similar to attached detailed listing for the Exemption 6 Dairy?
10. Has Ohio EPA transferred NPDES Permits to other owners/operators without valid MMPs?

I'm sure you agree that the attached listing of violations and problems should be addressed as soon as possible especially since your September 15, 2014 Order warned that the pollutants from this Dairy "would eventually reach Lake Erie". I feel there is a sense of urgency for you to contact the [REDACTED] Land Company since they are assembling a travelling pivot manure irrigator that would be in violation of Ohio EPA's July 2012 Order which prohibited any additional land application of manure. I appreciate your speedy investigation and resolution of these troubling issues.

Respectfully submitted,

**Exemption 6**

**Exemption 6**

Attachments

cc: Wood County Commissioners  
Ben Batey – Wood County Health Department  
U.S. Senator Sherrod Brown  
State Senator Randy Gardner  
State Representative Tim Brown  
U.S. EPA Region 5 Cheryl Burdett  
Ohio EPA Patricia Tebbe – BG

**Exemption 6**

## **OHIO'S SPLIT CAFO PERMITTING SCHEME**

To the best of my ability, the following is a timeline of numerous events and actions related to one Dairy CAFO in Wood County, formerly known as **Exemption 6** Dairy, according to the public records I have obtained over the years. Please note that some of these transactions were acknowledged in EPA reports and/or Orders, however, I did not actually receive copies of these documents as part of my public records requests.

Please note that **no** "updated" MMP has ever been developed and **no** "updated" MMP has ever been submitted to OEPA – yet OEPA has transferred this NPDES Permit three times. The manure pond still contains manure "that was generated while the operation was a CAFO" and therefore, has clearly been in violation of the NPDES Permit since **Exemption 6** Dairy was closed in July 2011 – almost five years ago.

### **2002**

June 2002 **Exemption 6 DAIRY** - a **Exemption 6**-head CAFF was developed by **Exemption 6** Dairy Development and occupied near Weston in **Exemption 6** Township, Wood County, Ohio.

### **2003**

November 2003 – U.S. EPA and OEPA inspected **Exemption 6** Dairy and observed a discharge of pollutants.

### **2004**

August 16, 2004 - OEPA issued a Discharge Violation Letter that stated **Exemption 6** was defined as a medium CAFO due to the discharge and ordered them to obtain an NPDES Permit. "As soon as possible, but in no case later than 30 days from receipt of this letter, please submit the application forms..."

September 15, 2004 – U.S. EPA Findings of Violation and Order for Compliance to cease all unauthorized discharges and implement BMPs. This Violation letter also warned that pollutants discharged from the production area and from the facility's storm water system would eventually reach Lake Erie.

September 15, 2004 – **Exemption 6** letter to OEPA in reply to August 16<sup>th</sup> letter – "we currently anticipate being able to submit the completed NPDES applications by October 15, 2004."

November 31 [sic], 2004 – U.S. EPA Application for NPDES permit for **Exemption 6** mature dairy cows.

- o Please note that this application stated there was no NMP "being implemented by the facility" but also stated that the NMP was "currently being reviewed by ODA."

### **2005**

January 12, 2005 – OEPA public notice of NPDES application for **Exemption 6** cows.

June 21, 2005 – OEPA Melinda Harris letter to all pending CAFO NPDES applications – "The ODA review and approval process of the plans for the state program cannot be counted for the requirements of the federal program because ODA is not the authorized NPDES permitting authority, and because the plans developed according to ODA's rules...do not meet the minimum requirements of the NPDES requirements."

### **2007**

April 20, 2007 – ODA Public Notice for the expansion permit from **Exemption 6** cows to **Exemption 6** cows. According to the Fact Sheet, the PTI included the construction of two additional **Exemption 6**-cow freestall dairy barns and a new earthen manure storage pond that would store 16.0 million gallons of manure.

May 30, 2007 – ODA Public Meeting

July 18, 2007 – ODA issued the Responsiveness Summary to public comments.

July 19, 2007 – ODA approved the expansion permit for **Exemption 6** cows.

### **2009**

September 18, 2009 – OEPA NPDES Fact Sheet for the **Exemption 6** Dairy LLC.

November 23, 2009 – OEPA information session for the NPDES Permit held in BG. OEPA accepted ODA's MMP for **Exemption 6** cows as a valid NMP.

- o How could OEPA have conducted a "meaningful review" for the completeness and sufficiency of the ODA's MMP since this Dairy never housed [Exemption 6] dairy cows?
- o "Exemption 6 Dairy LLC currently has a manure management plan developed through the Ohio Department of Agriculture in accordance with its Permit to Operate" - but was it in accordance with NPDES regulations?
- o "Land applied manure shall be managed in accordance with the Manure Management Plan and requirements of the NPDES permit."

NOTE: I have submitted many public records requests to OEPA for this Dairy's documents but OEPA has not furnished any annual reports that have detailed the total amount of manure removed, the total number of acres for land application, nor the manure distribution records. The Annual Reports show very random data but no proof that any of these numbers are legitimate.

## **2010**

February 4, 2010 - OEPA issued the NPDES Permit (according to June 23, 2010 letter)

March 1, 2010 - OEPA NPDES Permit became effective (according to June 23, 2010 letter)

June 23, 2010 - OEPA NOV to [Exemption 6] - No water quality sampling and no soil tests.

November 9, 2010 - AgStar filed a foreclosure lawsuit. The total of the four Notes was \$3.6 million - the loan required interest only payments beginning on August 1, 2008 then "any unpaid balance...was due in its entirety on the maturity date [July 1, 2009]."

November 10, 2010 - Dairy filed for Chapter 11 bankruptcy protection but this filing was later dismissed by the Court.

**2010 Annual Report** - Number of dairy cows = [Exemption 6]. No manure produced / 5,100 tons and 4,883,700 gallons land applied to 2,630 acres in MMP plus 795 acres under control of CAFO.

## **2011**

January 3, 2011 - OEPA NOV to [Exemption 6] - no Discharge Monitoring Report for November 2010.

July 1, 2011 - **OEPA APPROVED THE [Exemption 6] DAIRY NPDES PERMIT**. This permit stated under Part 1, C - SCHEDULE OF COMPLIANCE 1. MANURE MANAGEMENT PLAN - A. As soon as possible, but no later than July 19, 2012, [Exemption 6] Dairy LLC must develop and begin implementation of an updated Manure Management Plan that is created in accordance with this permit and which meets the requirements of the 2008 Federal CAFO Rule. (3) As soon as possible but no later than June 19, 2012, the updated Manure Management Plan shall be submitted to OEPA, Central Office, Division of Surface Water for review and availability to the public. Under (2) "It is acceptable to develop the Manure Management Plan which would be included as part of a renewal of the Permit-to-Operate issued to [Exemption 6] Dairy LLC by the Ohio Department of Agriculture." Under N. - In the event that this facility is closed for production purposes or is no longer a CAFO, this permit shall remain effective until the permittee demonstrates to the satisfaction of the Director that there is no remaining potential for a discharge of manure that was generated while the operation was a CAFO...**All manure shall be properly disposed of, and in the case of facility closure, the manure storage or treatment facilities shall be properly closed."**

July 8, 2011 - OEPA letter to [Exemption 6] - no Discharge Monitoring Report for May 2010.

July 8, 2011 - **ODA Shutdown Plan** for [Exemption 6] Dairy, LLC stated that "all manure and loose feed will be applied on to cropland according to the current Manure Management Plan (MMP)."

July 2011 - the cows were removed, the equipment was sold, and the deed was transferred to the lending institution - **Dairy Acquisition I, LLC** "in lieu of foreclosure". The manure pond was lowered one foot below freeboard by running a line across [Exemption 6] Road and spreading the manure on a field west of the Dairy.

August 11, 2011 - OEPA email response to my inquiry about [Exemption 6] failure to empty the manure pond - "It has been our experience that bankrupt dairies are sold relatively quickly. So, we tend to give some flexibility in terms of closure requirements but the other requirements of the NPDES permits remain in effect."

Fall 2011 - The ODA and OEPA permits were transferred to **DAIRY ACQUISITION 1, LLC**, the lending institution. The MMP stated "As soon as possible, but no later than July 19, 2012, [Exemption 6] Dairy LLC must develop and begin implementation of an updated MMP that is created in accordance with this permit and which meets the requirements of the 2008 Federal CAFO Rule."

September 2, 2011 – Exemption from real property conveyance fee from **Exemption 6** to Dairy Acquisition 1-  
“That no money was exchanged in consideration for the Deed.”

**2011 Annual Report** – Number of dairy cows = **Exemption 6** 3,820 tons and 3,832,500 gallons  
produced. Total land covered by MMP shows 3,087 acres and -0- acres under control of CAFO.  
Land applied 3,920 tons and 3,832,500 gallons.

## **2012**

July 5, 2012 – Wood County Commissioners letter requesting clarification from OEPA and ODA regarding  
the full manure pond which appeared to violate NPDES and ODA regulations.

July 6, 2012 – OEPA transferred the NPDES Permit to **Exemption 6 DAIRY, LLC** “while Dairy Acquisition  
1 LLC remained the owner of the Facility.”

July 17, 2012 – ODA Director Daniels replied to W.C. Commissioners that the facility was inspected on July  
2<sup>nd</sup> – manure levels “are within permitted levels” and “the facility was being properly maintained.” NOTE:  
Compare ODA’s response with OEPA’s August 29, 2012 Report below of their July 30<sup>th</sup> inspection that  
included many serious issues, including vegetation on the lagoon perimeter, inadequate containment for  
silage leachate, etc. Also note OEPA, whose federal authority exceeds ODA’s state authority over CAFO  
permits, did not reply to the Commissioners.

July 19, 2012 – ODA PERMIT TO EXPAND EXPIRED.

July 21, 2012 – Someone delivered a few cows.

August 13, 2012 – my letter to US EPA Cheryl Burdett – manure pond not properly closed. OEPA and ODA  
both denying responsibility.

August 29, 2012 – OEPA Letter re: Inspection Report for July 30 inspection – “**No manure should be  
applied to any fields unless up-to-date soil samples and manure analyses are obtained.**”

Complaints included “**the lack of a Manure Management Plan**...as required by the NPDES permit / not  
maintaining records / not enough storage / buildup of solids in manure lagoon / mow and control  
vegetation / inadequate containment for silage leachate / aboveground fuel storage tanks above minimum  
threshold of rules, etc. “As soon as possible, but **no later than October 1, 2012**, you should submit a  
plan of action to this Office which demonstrates your anticipated manure distributions or applications this  
coming Fall – plus an updated MMP.”

August 30, 2012 – EPA Tinka Hyde’s reply to August 13 letter – “facility is currently considered  
operational, and is not required to close its storage structures at this time.” Contrary to Ms. Hyde’s  
response, the NPDES Permit regulations seem to be very clear – “In the event that this facility is closed  
for production purposes...all manure shall be properly disposed of...[and] the manure storage...shall be  
properly closed.” Obviously, EPA could avoid compliance with NPDES regulations “altogether by not taking  
any action”. If EPA keeps transferring this Dairy to other entities, there would never be any action taken  
to force anyone to comply with the closure regulations that should have been triggered when **Exemption 6**  
closed the facility in 2011. Instead, EPA keeps kicking the manure can down the road.

November 20, 2012 – A NOV was sent as a follow up to the August 29, 2012 letter. OEPA again  
requested an update within 14 days.

December 4, 2012, the USPEA conducted an inspection. “An MMP and records associated with the MMP  
were not contained onsite as required by the NPDES permit.”

**2012 Annual Report** – Number of dairy cows = **Exemption 6** 2,000 tons and 1.25 M gallons of manure  
produced. Zero tons and zero gallons of manure land applied.

## **2013**

January 23, 2013 – US EPA letter to **Exemption 6** requesting an updated MMP “**by July 19, 2012**” and also  
documenting other problems with the Permit. **Exemption 6** said the waste holding ponds had been  
assessed this fall to ensure enough storage capacity is maintained for the winter.” “**Manure is not  
transferred off-site to other parties.**” **Exemption 6** said he maintained some of the records in his head.”  
“The nutrient management plan was not furnished to EPA after the inspection as requested. **EPA has no  
confirmation that an updated MMP has been developed and implemented for Exemption 6 Dairy  
in accordance with the 2008 Federal CAFO Rule.**”

February 1, 2013 – **Exemption 6** wrote to US EPA stating - all manure “is being sold to another farm operation  
in another county and is not being land applied by the Exemption 6 Dairy or on any of the land identified in  
the farm’s current MMP.” “We...will not be applying manure until the new MMP is completed.”



July 12, 2013 – an additional NOV from OEPA indicated failure to submit a 2013 Annual Report as required under the NPDES permit.

**2013 Annual Report – none submitted.**

## **2014**

January 23, 2014 – I took pictures of **Exemption 6** spreading manure on snow-covered fields adjacent to the barns and submitted a complaint.

January 24, 2014 – OEPA inspected the Facility in response to my complaint of land application of manure onto frozen and snow covered fields. They found that manure was land applied from January 21 through January 25 and also that the settling basin was full and frozen.

January 29, **2014** – **OEPA Notice of Violation** for land application of manure onto frozen and snow covered ground on four days in January. This Notice also documented requirements to maintain a minimum of one foot of freeboard at all times / problems maintaining the settling basin to prevent land application on frozen ground / manure storage structures were not emptied to provide sufficient storage capacity of manure through winter / water quality samples must be collected, etc. Please note that the MMP stated "As soon as possible, **but no later than July 19, 2012**, **Exemption 6** Dairy LLC must develop and begin implementation of an updated Manure Management Plan that is created in accordance with this permit and which meets the requirements of the 2008 Federal CAFO Rule." It also stated that "the Manure Management Plan (MMP) included within the Permit-to-Operate issued by the Ohio Department of Agriculture on July 19, 2007...through Issuance of this NPDES permit is incorporated as a condition of this NPDES permit." **This ODA permit expired on July 19, 2012.**

February 4, 2014 – **ODNR SWCD** letters to **Exemption 6**, Dairy Acquisition 1 and Taft Service Solutions. During an investigation – "I discovered that the sand settling basin was over its storage capacity and appeared to have been overflowing for several weeks." This letter suggested that it was "advisable to compromise the freeboard" in the holding pond! (Wouldn't this be in violation of the NPDES Permit?) It also detailed several other very serious problems and suggested "hauling manure offsite to another storage facility or waste water treatment plant."

February 10 and 12, 2014 – **ODNR SWCD** letters regarding overflow from manure storage structure. "You indicated to us that an obstacle that has hindered manure application is the ability to find local landowners willing to accept manure application." Also "By August 1, 2014 – **Exemption 6** was supposed to provide an NMP to Wood SWCD with soil tests. "Your operation is subject to escalated enforcement actions."

March 20, 2014 – OEPA received a complaint which reported that manure from the Facility was discharging into the **Exemption 6** ditch. OEPA responded and found a tile discharging manure from the production area...into the roadside ditch.

March 21, 2014 – OEPA Notice of Violation to **Exemption 6** due to failure to submit a 2013 Annual Report. This Report also stated "The solid settling pond was found to be overflowing and the manure storage lagoon was at or near its limit. The manure was found to have been stockpiled in the silage bunkers and was leaching into the production area and nearby fields. Also, dead livestock was observed being composted into the production area."

March 26, 2014 – An NOV was issued for the tile discharges and it requested the steps that would be taken to prevent another discharge and restore the facility to compliance.

April 8, 2014 – OEPA received a discharge prevention plan that the tiles associated with the March 20 discharge event were plugged.

April 28, 2014 – Another field tile was found seeping manure from the production area.

May 2014? – **Exemption 6** vacated facility.

May 30, 2014 – **Exemption 6** and I submitted a Verified Complaint No. VC14013W01VC to OEPA.

June 25, 2014 – Consultant contacted OEPA and reported that 720,000 gallons of liquid manure had been removed and hauled to Campbell's Blodigester.

June 27, 2014 – OEPA replied that their Legal Office reviewed the V.C. and it was found to be valid. In response, OEPA commenced an investigation.

July 22, 2014 – Facility sold at auction.

August 26, 2014 – OEPA transferred the NPDES Permit to **Exemption 6** **LAND COMPANY**. The NPDES Permit on the OEPA website shows: "as soon as possible but no later than July 19, 2012, **Exemption 6** Dairy LLC

must develop and begin implementation of an updated Manure Management Plan that is created in accordance with this permit and which meets the requirements of the 2008 Federal CAFO Rule.

November 25, 2014 – DIRECTOR'S ORDERS issued – Exemption 6 was ordered to pay \$6,120 for civil penalties. Exemption 6 could appeal to ERAC.

**2014 Annual Report – Number of dairy cows = Exemption 6. 6,399/01 tons of manure transferred. 6,340 tons and 4,876,000 gallons applied to 764.6 acres in MMP. 6,399.01 tons to Exemption 6 BioGas LLC.**

- o Please note – Exemption 6 Biogas is already taking manure from another nearby dairy CAFO and manure from Exemption 6 Dairy was NOT approved in Exemption 6 MMP/NMP.

## **2015**

February 28, 2015 – OEPA NPDES Modification Expiration Date. OEPA provided no new NPDES Permit when I requested all updated documents.

March 12, 2015 – OEPA letter to "Taft Service Solutions Corp." regarding the Proposed Administrative Orders for Dairy Acquisition 1, LLC – Exemption 6 Dairy.

March 12, 2015 – OEPA letter to Exemption 6a regarding the Proposed Administrative Orders and civil penalty.

March 18, 2015 – my letter to U.S. EPA Adm. McCarthy asking for an investigation into the failure of the OEPA to act on violations of an NPDES Permit as detailed in our V.C. I questioned the "tortuous split/phased CAFO permitting programs in Ohio."

March 30, 2015 – I received another letter from OEPA that our V.C. was found to be a valid V.C and that the Central Office had completed its "thorough investigation and OEPA was currently in negotiations with the Respondents to address the violations.

April 7, 2015 – US EPA letter to me regarding my March 18 letter regarding the failure of OEPA to act on potential violations of the Exemption 6 Dairy NPDES permit.

September 24, 2015 – OEPA letter with the "proposed" Director's Final Findings and Order.

October 7, 2015 – I emailed OEPA attorney Simcic and asked why the "Proposed Administrative Orders" stated that OEPA was finalizing the Orders since the Orders did not address many serious issues detailed in our V.C. I also questioned "the lack of a Manure Management Plan for this Facility" since the current owner was currently applying manure to some nearby fields.

October 15, 2015, OEPA attorney Simcic letter to me – "Ohio EPA will follow up on your concerns regarding the lack of a manure management plan from the new owner and verify that any land application of manure will occur in an appropriate manner."

- o I have received no follow-up on my concerns in the past eight months.

December 9, 2015 – OEPA Director's Final Findings and Orders to our V.C. The Final Orders "noted the lack of a Manure Management Plan ("MMP") for the Facility, as required by the NPDES permit."

**2015 Annual Report – none submitted.**

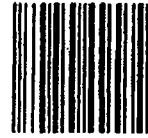
Last updated – June 15, 2016 (2016 public records have not yet been requested.)



7015 3010 0001 1938 4892



1000

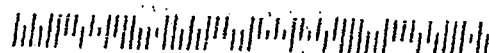


43215

U.S. POSTAGE  
PAID  
BOWLING GREEN  
43402  
JUL 25, 18  
AMOUNT  
**\$4.66**  
R2304N117385-04

*DSW*  
*Verified complaint*

Director Craig H. Butler  
Ohio E.P.A.  
50 West Town St., Suite 700  
Columbus, Oh 43215



## Wilson, Rick

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**From:** Lane, Matthew  
**Sent:** Wednesday, October 26, 2016 11:20 AM  
**To:** Wilson, Rick  
**Subject:** RE: Spill 2060-0-Wood County NPDES permitted [Exemption 6] Dairy.  
**Attachments:** meteogram20161019-07.png; Capture.PNG; Capture2.PNG

Attached are pics from my personal archive of NOAA forecasts. This forecast is for Portage, OH, which is ~4miles from the site.

I'll give you a call.

---

**From:** Wilson, Rick  
**Sent:** Wednesday, October 26, 2016 11:09 AM  
**To:** Lane, Matthew  
**Subject:** RE: Spill 2060-0-Wood County NPDES permitted [Exemption 6] Dairy.

Good morning Matt:

Based on a phone call I just received from the complainant, I learned the following:

This complaint below was associated with [Exemption 6] Land Company, LLC which is a dairy – with a CAFO permit.

**I would like to see the forecast. If Wood County SCWD has it.** I will also be asking the permittee for records on this land application event.

I'd like to discuss this dairy and some of the background goings-on with you and Wood SWCD. Please let me know when we can do that at your earliest convenience.

Thanks Matt.  
~rick

---

**From:** Wilson, Rick  
**Sent:** Monday, October 24, 2016 8:35 AM  
**To:** Taylor, Todd <Todd.Taylor@epa.ohio.gov>  
**Subject:** FW: Spill 2060-0

In case you track these. Below id the ODA response ...

---

**From:** Lane, Matthew  
**Sent:** Friday, October 21, 2016 4:42 PM  
**To:** Wilson, Rick <Rick.Wilson@epa.ohio.gov>  
**Subject:** RE: Spill 2060-0

Wood SWCD investigated. Some manure was applied to < 5ac. There was >1" of rain overnight 10/19-20, but there was not a >50% of >0.5" of precip. in the forecast. According to investigation:

Operation is in compliance with all regulations regarding manure application. This field is highly unlikely to discharge any pollutants under current conditions. The operator is well-versed in the BMPs that minimize risk of manure runoff.

Thanks for forwarding the complaint.



**From:** Wilson, Rick  
**Sent:** Friday, October 21, 2016 11:49 AM  
**To:** Lane, Matthew; Ety, Andrew  
**Subject:** Fwd: Spill 2060-0

FYI.

Begin forwarded message:

**From:** EPA ERFAX ER <[erfax.er@epa.ohio.gov](mailto:erfax.er@epa.ohio.gov)>  
**Date:** October 21, 2016 at 10:48:14 AM EDT  
**To:** "Wilson, Rick" <[Rick.Wilson@epa.ohio.gov](mailto:Rick.Wilson@epa.ohio.gov)>, EPA ERFAX ER <[erfax.er@epa.ohio.gov](mailto:erfax.er@epa.ohio.gov)>  
**Subject:** Fw: Spill 2060-0

*Attached is a courtesy copy of an incident report that may interest your program. This communication is informational. This is not a referral nor is it a request for SME support.*

*The Duty Officer will distribute a red email to Program and District Chiefs if the incident meets ER's red email criteria and ER actually responds to the scene.*

DO Taylor

614-644-3199

Duty Officer

Ohio Environmental Protection Agency

Division of Environmental Response, Investigation and Enforcement

24 Hour Hotline 800-282-9378

---

**From:** [spills@epa.ohio.gov](mailto:spills@epa.ohio.gov) <[spills@epa.ohio.gov](mailto:spills@epa.ohio.gov)>  
**Sent:** Friday, October 21, 2016 08:48  
**To:** EPA ERFAX ER  
**Subject:** Spill 2060-0

## Spill #2060-0

Resp Party	Exemption 6 APPLE FARM
Product	MANURE
Amount	UNK
County	WOOD
City/Twp	Exemption 6 TWP
Location	Exemption 6 [REDACTED]

<b>District</b>	NW
<b>Reported By</b>	ANONYMOUS
<b>Title</b>	
<b>Telephone</b>	
<b>Affiliation</b>	CIT
<b>Reported Date</b>	21-OCT-16 08:43
<b>Discovered Date</b>	19-OCT-16 12:00
<b>Occured</b>	:
<b>Complaint</b>	Y
<b>Did Spiller Report</b>	N
<b>Waterway</b>	N/A
<b>Media 1</b>	LAND OR LAND SURFACE IMPACT
<b>Media 2</b>	N/A
<b>Media 3</b>	N/A
<b>Cause</b>	N/A
<b>Reason</b>	N/A
<b>Other Agency Notified</b>	N/A
<b>Received By</b>	TAYLOR, TODD
<b>Remarks</b>	ANONYMOUS COMPLAINT OF FARMER APPLYING MANURE TO FIELD ON WEDNESDAY AND ON THURSDAY THE FIELD RECEIVED ABOUT AN INCH OF RAIN. ANONYMOUS IS CONCERNED ABOUT RUNOFF ISSUES.

**Wilson, Rick**

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**From:** Exemption 6 <Exemption 6>  
**Sent:** Wednesday, October 26, 2016 10:48 AM  
**To:** Wilson, Rick

Rick

I'm heading your way tomorrow with my records, what would be a good time. I think its a bout a 2 hour drive, I can leave no sooner than 10 am.

Exemption 6

**From:** Wilson, Rick  
**Sent:** Tuesday, October 18, 2016 11:20 AM  
**To:** **Exemption 6**  
**Subject:** RE: August 31, 2016 Inspection Follow-up

**Exemption 6** :

It is very important that you develop and follow an up-to-date MMP according to the terms and conditions of the NPDES permit as soon as possible. As mentioned below this includes but is not limited to: current herd size, facility conditions, and available systems and land for manure application.

Per Item II(J) of your NPDES permit

**J. Manure Management Plans**

With the exception of Insect and Rodent Control Plans, the Manure Management Plan (MMP) included within the Permit-to-Operate issued by the Ohio Department of Agriculture on July 19, 2007, reviewed, and approved by the Director through issuance of this NPDES permit is incorporated as a condition of this NPDES permit.

**1. SIGNATURE AND PLAN REVIEW**

- a. The plan shall be retained onsite at the CAFO.
- b. The Director may notify the permittee at any time that the plan does not meet one or more of the minimum requirements of this permit. Within 30 days of such notification from the Director, the permittee shall make the required changes to the plan and shall submit to the Director a revised plan demonstrating that the requested changes have been made.

**2. KEEPING PLANS CURRENT**

The permittee shall amend the plan prior to a change in design, construction, operation, or maintenance, which has an effect on the potential for the discharge of pollutants to the surface waters of the State or if the MMP proves to be ineffective in eliminating or minimizing pollutants from sources identified under Part I, A, 3, or otherwise achieving the general objectives of minimizing pollutant discharges associated with the CAFO.

When a permittee proposes to make changes to the MMP previously submitted to and approved by the Director, the permittee shall provide the Director with the most current version of the MMP and identify changes from the previous version in a cover letter prior to implementation of the changes. The results of calculations made in accordance with Part II, J, 4 are not subject to this notification requirement.



The Director will review the revised MMP to ensure that it meets the requirements of this permit and will determine whether the changes to the MMP necessitate revision to the terms of the MMP incorporated into this permit. If no revision is necessary, the Director will notify the permittee and upon such notification the permittee shall implement the revised plan. If revision to the terms of the MMP is necessary, the Director will follow the applicable modification process in 40 CFR Part 122.42(e)(6)(A) to revise the terms of the MMP incorporated into this permit. Modified MMP submittals with substantial changes are subject to a 30-day public notification period on the Ohio EPA website.

Examples of substantial changes to a MMP requiring a permit modification include, but are not limited to:

- a. Addition of new land application areas not previously included in the MMP;
- b. Any changes to the field-specific maximum annual rates for land application and to the maximum amounts of nitrogen and phosphorus derived from all sources for each crop;
- c. Addition of any crop or other uses not included in the MMP and corresponding field-specific rates of application; and
- d. Changes to site-specific components of the MMP, where such changes are likely to increase the risk of nitrogen and phosphorus transport to waters of the State.

### 3. CONTENTS OF PLAN

The manure management plan shall address the form, source, amount, timing, agronomic rate, and method of application of nutrients to each field to achieve compliance with this permit, ensure appropriate agricultural utilization of the nutrients, and minimize movement of pollutants to surface waters. To the extent applicable, the MMP shall address the following:

- a. Storage of manure, management of mortalities, diversion of clean water, prevention of contact of animals with waters of the State, and proper chemical handling to ensure compliance with Part I, A, 1, Part II, and Part VII of this permit.
- b. Inspections, monitoring, and maintenance activities for structures and equipment involved in manure handling and storage in compliance with Part II and Part VII, Production Area Requirements of this permit.
- c. If applicable, a manure land application plan that will be implemented to comply with Part VII of this permit, including: 1) a total nutrient budget; 2) manure and soil characterizations; 3) application methods and timing that will minimize nutrient transport to waters of the State; and 4) field specific agronomic application rates.
- d. If applicable, a manure distribution and utilization plan including: 1) total nutrient budget; 2) manure characterization; and 3) manure removal methods and timing that will minimize nutrient transport to waters of the State.
- e. Site specific conservation practices to be implemented, including as appropriate buffers or equivalent practices, to control runoff of pollutants to waters of the State.

In my last e-mail correspondence to you, I provided a MMP update packet. This packet has some essential information including inspection and record keeping requirements, and form to aid in compliance. During the August 31 inspection, most required records were unavailable.

Please provide the following as soon as possible:

- As soon as possible, please forward me all records (including land application, manure storage, and facility inspections) kept to demonstrate compliance with your NPDES permit since my inspection on August 31, 2016.
- Please provide this office with an estimate of annual volume of production area runoff that will be directed to manure storage system (according to your most recent proposal).
- Please provide the September 15 manure storage evaluation record.
- Please provide this office with a schematic of the proposed production area runoff collection plan. (This needs to be reflected in the revisions to the MMP.)

You have an expired NPDES permit. However, the NPDES permit is active and enforceable. I have provided you with NPDES renewal forms. I have concerns with the timing (or absence of timelines) of the items (diversion of runoff to concrete lagoon and the MMP development) you described in your response.

Feel free to call with questions.

~rick

**Rick Wilson, Environmental Specialist**  
**Ohio EPA | Division of Surface Water**

**Surface Water Improvement and Nonpoint Source-§319 program**

P.O. Box 1049, Columbus, OH 43216-1049

Ph: 614-644-2032

Fax: 614-644-2745

[rick.wilson@epa.ohio.gov](mailto:rick.wilson@epa.ohio.gov)



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**From:** Exemption 6 [mailto:Exemption 6]

**Sent:** Tuesday, October 18, 2016 1:16 AM

**To:** Wilson, Rick <[Rick.Wilson@epa.ohio.gov](mailto:Rick.Wilson@epa.ohio.gov)>

**Subject:** RE: August 31, 2016 Inspection Follow-up

Rick

I've hired a contractor to divert any silage and or yard run off to the concrete lagoon.

And I'm working with a consultant on getting a proper nutrient management plan in place.

The contractor said the beginning of November, the nutrient management plan I'm not sure how long it will take, but I was hoping by mid to late November we should have one.

I'm looking at the non-renewal of the permit.

So after I get these two things done we can pass a re-inspection.

Exemption 6

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**From:** [Rick.Wilson@epa.ohio.gov](mailto:Rick.Wilson@epa.ohio.gov) [mailto:[Rick.Wilson@epa.ohio.gov](mailto:Rick.Wilson@epa.ohio.gov)]

**Sent:** Friday, September 16, 2016 8:21 AM

**To:** Exemption 6

**Cc:** [Daniel.Bruner@agri.ohio.gov](mailto:Daniel.Bruner@agri.ohio.gov)

**Subject:** August 31, 2016 Inspection Follow-up

Exemption 6:

Following up:

As described during the August 31, 2016 inspection, I am providing you with the NPDES MMP Update Packet that provides references and forms that can help you to meet the terms and conditions of your expired (yet still enforceable) NPDES permit.

I am also attaching a pdf of the correct NPDES permit (The one I shared with you was downloaded from the wrong location...and likewise did not have the correct name on the cover.). This permit transfer was processed on September 9, 2014 with effective date of the August 26, 2014 (the date the transfer paperwork was signed between You and Exemption 6).

As mentioned during the inspection, it was apparent that contaminated production area runoff (from feed storage area) is not contained. Past issues with un-contained production area runoff and discharges of manure to waters of the state are part of the reason this facility is currently regulated as a Medium CAFO by Ohio EPA.

Because your permit is expired, it is important you resolve of renewal (or non-renewal) procedures.

↓At this link↓: you can download and complete the necessary renewal NPDES Applications which will allow for renewal of the Exemption 8 Land Company LLC permit.

<http://epa.ohio.gov/dsw/cafo/index.aspx#126567136-how-to-apply-for-a-cafo-permit>

To renew the NPDES permit the following must be provided to this office:

- Form 1
- Form 2B
- Antidegradation Addendum
- Updated Manure Management Plan (per current herd size, facility conditions, and available systems and land for manure application).
- Administrative processing Fee of \$200 Check payable to "Treasurer, State of Ohio"

If Medium CAFOs can demonstrate that they no longer have discharges to waters of the state from their production area; and the facility has an up-to-date manure management plan (and is following it), then a reevaluation can be done with respect to Ohio EPA permitting authority for NPDES CAFO permit. This reevaluation would allow this office to determine if a NPDES permit is still required, or if the permit can be taken off-the-books through the No-Permit-Required (NPR) process.

Please do not hesitate to call with question comments or concerns

~rick

Rick Wilson, Environmental Specialist  
Ohio EPA-Division of Surface Water  
614-644-2032

## Wilson, Rick

---

**From:** Wilson, Rick  
**Sent:** Wednesday, October 26, 2016 11:15 AM  
**To:** Exemption 6; Exemption 6 Dairy  
**Subject:** FW:

Exemption 6:

Please be sure to bring (or e-mail scans) manure application records (including forecast) from sand-manure application done October 18 and/or 19<sup>th</sup>. You may be aware that there was a complaint in that regard and it was investigated by Wood County SWCD.

~rick

**From:** Exemption 6 [mailto:Exemption 6]  
**Sent:** Wednesday, October 26, 2016 10:48 AM  
**To:** Wilson, Rick <Rick.Wilson@epa.ohio.gov>  
**Subject:**

Rick

I'm heading your way tomorrow with my records, what would be a good time. I think its a bout a 2 hour drive, I can leave no sooner than 10 am.

Exemption 6



# Stormwater Runoff Annual Generation Worksheet

Exemption B Dairy

## A. REQUIRED STORAGE VOLUME

### 1. Normal Precipitation

#### a. Average annual precipitation settling basin (not applicable existing structure)

See table below and pond cross section

Month	Precipitation (in)	Evaporation (in)	30 yr avg net (in)
January	2.20	0.60	1.60
February	1.80	0.80	1.00
March	2.70	1.50	1.20
April	3.40	2.60	0.80
May	3.60	4.10	-0.50
June	3.60	4.70	-1.10
July	3.50	4.80	-1.30
August	2.70	4.10	-1.40
September	2.60	2.90	-0.30
October	2.40	2.10	0.30
November	2.50	1.10	1.40
December	2.00	0.60	1.40
Totals	33.00	29.90	3.10

Pond area	=	0.00	acres
Total Area	=	0.00	
Net collected	SUBTOTAL =	0	ft <sup>3</sup> SUBTOTAL (gals) 0

### 2. Silage Pad/Collection Areas Runoff

#### a. Normal runoff from collected areas

Total average precipitation	=	33.00	inches
Runoff areas - 59% Unsurfaced, 41% Concrete	=	1.79	acres (Areas 1 thru 4)
Runoff factor at 31% of precipitation	=	10.23	inches (Weighted factor from Fig. 10C-1 & Fig. 10C-2)
Total runoff	SUBTOTAL =	66,471	ft <sup>3</sup> SUBTOTAL (gals) 497,207

#### c. Leachate seepage

Seepage	=	1.0	cubic feet per ton of stored silage
Silage storage per acre	=	21500	tons per silage acre
Silage storage area	=	0.32	acres (Area 1 & 2)
Silage Leachate Seepage Volume	SUBTOTAL =	6,880	ft <sup>3</sup> SUBTOTAL (gals) 51,462

<b>ANNUAL STORMWATER RUNOFF GENERATION VOLUME (gals)</b>	<b>548,669</b>
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**NORTH POINT  
ENGINEERING**

OCTOBER, 2016





10/2015

Exemption 6

Exemption 6

Exemption 6

Water Features

- Streams
- Canals
- Pipelines
- Water bodies
- Coastlines
- Catchments
- Hydrologic Units



Application No. OH0135925

Modification Issue Date: May 6, 2011

Modification Effective Date: July 1, 2011

Modification Expiration Date: February 28, 2015

Ohio Environmental Protection Agency  
Authorization to Discharge Under the  
National Pollutant Discharge Elimination System

In compliance with the provisions of the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251 et. seq., hereinafter referred to as the "Act"), and the Ohio Water Pollution Control Act (Ohio Revised Code Section 6111),

**Exemption 6** Land Company LLC

is authorized by the Ohio Environmental Protection Agency, hereinafter referred to as "Ohio EPA," to discharge water treatment back flush water and storm water associated with industrial activity from the **Exemption 6** Land Company concentrated animal feeding operation located at **Exemption 6**, Weston, Ohio, Wood County and discharging to an unnamed tributary of West Branch of Tontogany Creek in accordance with the conditions specified in Parts I, II, III, and VII of this permit.

In accordance with the antidegradation rule, OAC 3745-1-05, I have determined that a lowering of water quality in the unnamed tributary of West Branch of Tontogany Creek for the discharge of water treatment back flush water is necessary. Provision (D)(1)(i) was applied to this application. This provision excludes the need for the submittal and subsequent review of technical alternatives and social and economic issues related to the degradation. Other rule provisions, however, including public participation and appropriate intergovernmental coordination were required and considered prior to reaching this decision.

This permit is conditioned upon payment of applicable fees as required by Section 3745.11 of the Ohio Revised Code.

This permit and the authorization to discharge shall expire at midnight on the expiration date shown above. In order to receive authorization to discharge beyond the above date of expiration, the permittee shall submit such information and forms as are required by the Ohio EPA no later than 180 days prior to the above date of expiration.

---

Craig W. Butler  
Director

Total Pages: 58

Part I, A. - DAILY MAXIMUM DISCHARGE LIMITATIONS

1. CAFO PRODUCTION AREA

- a. Beginning on the effective date of this permit, there shall be no discharge of manure pollutants from the production area to waters of the State. The production area shall be properly designed, constructed, operated, and maintained to contain manure, direct precipitation, and the runoff from a 100-year, 24-hour storm event and the production area shall be operated in compliance with the additional measures and records required in Part II and Part VII.
- b. Dry weather discharges of manure are prohibited from production and land application areas.
- c. Storm water associated with industrial activity can be discharged in accordance with this permit as long as good housekeeping practices are conducted to ensure that the storm water is not contaminated by manure, animal feed, etc. Water treatment back flush water can be discharged in accordance with this permit. See Part I, B for monitoring requirements.
- d. Any spill, discharge, or overflow of pollutants from the production area to waters of the State shall not cause an exceedance of Ohio Water Quality Standards in the receiving water of the State.



e. If a spill, discharge or overflow of manure occurs at any time from the production area to waters of the State (a violation of Part I, A, 1, a), the permittee shall collect and analyze grab samples from each spill, discharge or overflow for the following list of parameters:

00310 - Biochemical Oxygen Demand, 5 Day (BOD5) - mg/l

00610 - Nitrogen, Ammonia (NH<sub>3</sub>) - mg/l

00665 - Phosphorus, Total (P) - mg/l

(Note: units of mg/l)

The permittee shall: (a) collect the sample within 30 minutes of the first knowledge of the spill, discharge, or overflow; or (b) if sampling in that period is inappropriate due to dangerous weather conditions, collect the sample as soon as possible after suitable conditions occur, and document the reason for delay.

The permittee shall notify Ohio EPA by calling 1-800-282-9378 as soon as possible but no later than 24 hours following the first knowledge of the spill, discharge, or overflow. Immediate notification allows Ohio EPA to assist in clean-up and remediation efforts and may reduce magnitude of environmental impact and extent of permit violations.

The permittee shall report the results of the spill, discharge, or overflow sample to Ohio EPA, Central Office, Division of Surface Water, within 14 days of occurrence. The report shall, at a minimum, contain the sample results of the aforementioned parameters, describe the reason for the spill, discharge, or overflow, the location, estimate of quantity and duration of the spill, discharge, or overflow, quantity and duration of the precipitation leading up to the event, as well as any measures taken to clean up and eliminate the spill, discharge, or overflow and prevent reoccurrence of the spill, discharge or overflow. See Part III, 12 and Part VII, Production Area Requirements.

Along with the report submittal, the permittee shall submit a revised permit application and Antidegradation Addendum that address the potential to discharge to waters of the State.

f. The permittee shall ensure removal and disposal of animal carcasses in a manner that prevents discharge of pollutants to waters of the State and ensure that carcasses are not disposed of in the manure storage or treatment facility unless the facility is designed specifically to treat the carcasses. Please note that mortality compost is included in the definition of manure in Part I, A, 4 of this permit, therefore all permit requirements pertaining to manure also include mortality compost.

g. Chemicals and other contaminants shall not be disposed of in the manure storage or treatment facility unless the facility is designed specifically to treat such chemicals and contaminants.

h. Animals stabled or confined at the facility shall not come into contact with surface waters of the State.

## 2. LAND APPLICATION ACTIVITIES

- a. There shall be no discharge of pollutants to waters of the State from manure stockpiles. See Part VII, B for stockpile setback restrictions.
- b. There shall be no discharge to waters of the State during the process of applying manure to land.
- c. There shall be no discharge of pollutants to waters of the State from land applied manure except for discharges that are composed of storm water runoff and/or snow melt runoff originating from a land area where manure from a CAFO has been applied in compliance with the manure management plan and this permit.
- d. The permittee shall notify Ohio EPA by calling 1-800-282-9378 as soon as possible but no later than 24 hours following the first knowledge of a spill or discharge of pollutants from land applied manure that is not composed of storm water runoff (e.g., tile discharge during dry weather), except as required by Part VII, B for land application on frozen and/or snow covered ground. Immediate notification allows Ohio EPA to assist in clean-up and remediation efforts and may reduce magnitude of environmental impact and extent of permit violations.

The permittee shall submit a written report of the event to Ohio EPA, Central Office, Division of Surface Water, within 14 days of the spill or discharge. The report shall, at a minimum, describe the reason for the spill or discharge, the location, estimate of quantity and duration of the spill or discharge, quantity and duration of the precipitation leading up to the event, land application records, as well as measures taken to clean up and eliminate the spill or discharge and prevent reoccurrence of the spill or discharge. See Part III, 12 and Part VII, Production Area Requirements.

### 3. LIST OF POLLUTANTS

For the purpose of Part III, 12, A, 4 of this permit, the following list of pollutants is established: Biochemical Oxygen Demand, 5 Day (BOD5); Nitrogen, Ammonia (NH3); Phosphorus, Total (P).

### 4. DEFINITIONS

**100-YEAR, 24-HOUR STORM EVENT:** means the maximum 24-hour precipitation event with a probable recurrence interval of once in 100 years (i.e., a storm event that has a 1% chance of happening in any given year) as defined by the National Weather Service in Technical Paper Number 40, "Rainfall Frequency Atlas of the United States", May 1961, and subsequent amendments, or equivalent regional or state rainfall probability information developed there from. Current information can be found in "Rainfall Frequency Atlas of the Midwest" (Bulletin 71, 1992, F.A. Huff and J.R. Angel, Midwestern Climate Center and the Illinois State Water Survey, Champaign, IL).

**ANIMAL FEEDING OPERATION (AFO):** is defined in 40 CFR 122.23(b)(1) as: "...a lot or facility (other than an aquatic animal production facility) where the following conditions are met: (i) Animals (other than aquatic animals) have been, are, or will be stabled or confined and fed or maintained for a total of 45 days or more in any 12-month period, and (ii) Crops, vegetation, forage growth, or post-harvest residues are not sustained in the normal growing season over any portion of the lot or facility".

**BEST MANAGEMENT PRACTICES (BMPs):** means schedules of activities, prohibitions of practice, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the United States. Best Management Practices also include treatment requirements, operating procedures, and practices to control site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

**CERTIFIED MANURE MANAGEMENT PLANNER:** means a technical service provider as defined by United States Department of Agriculture in 7 CFR Part 652.2 as "an individual, entity, or public agency either: (1) certified by NRCS and placed on the approved list to provide technical services to participants; or, (2) selected by the Department to assist in the implementation of conservation programs covered by this part through a procurement contract, contribution agreement or cooperative agreement with the Department."

**CHRONIC RAINFALL:** means a series of wet weather conditions that preclude manure removal from a properly designed, constructed, maintained, and operated manure storage or treatment facility, precludes land application of manure in accordance with this permit, and exceeds the documented and/or State approved chronic rainfall design storage value used in the design of the manure storage or treatment facility.

**CONCENTRATED ANIMAL FEEDING OPERATION (CAFO):** means an AFO that is defined as a large CAFO or as a medium CAFO, or that is designated as a CAFO by the Director or Regional Administrator. Two or more AFOs under common ownership are considered to be a single AFO for the purposes of determining the number of animals at an operation, if they adjoin each other or if they use a common area or system for the disposal of wastes.

**DISCHARGE:** means the addition of any pollutant or combination of pollutants to the waters of the State from a point source. This definition includes additions of pollutants into waters of the State from: surface water runoff which is collected or channeled by man; discharges through pipes, sewers, or other conveyances owned by a State, municipality, or other person which do not lead to a treatment works; and discharges through pipes, sewers, or other conveyances leading into privately owned treatment works.

**DRINKING WATER SOURCE PROTECTION AREA FOR A PUBLIC WATER SYSTEM USING GROUND WATER:** means the surface and subsurface area surrounding a public water supply well(s) which will provide water from an aquifer to the well(s) within five years as delineated or endorsed by the Director under Ohio's wellhead protection and source water assessment and protection programs.

**EMERGENCY MANAGEMENT ZONE (EMZ):** means the surface and subsurface area in the immediate vicinity of a public water system intake as delineated or endorsed by the Director under the source water assessment and protection program within which the public water supply owner/operator has little or no time to respond to potential contamination from a spill, release or weather related event. The standard emergency management zone boundary consists of a semi-circle that extends five hundred feet upstream of the intake and one hundred feet downstream of the intake, except as modified due to local conditions.

**FLOODPLAIN:** means the area adjoining any river, stream, watercourse or lake that has been or may be covered by floodwater.

**FORECAST:** means the daily "hour by hour" forecast as presented by The Weather Channel ([www.weather.com](http://www.weather.com)), or equivalent. More specifically, the forecast for the zip code that represents the land application area/site shall be printed/recorded up to, but not greater than 24-hours prior to each land application event at any site. The percent chance of rain listed under the hour by hour forecast shall be used to determine compliance with Part VII, B, 2 of this permit.

**FREEBOARD:** means the linear distance in feet from the top of the water surface measured vertically to the lowest possible overflow elevation (i.e., the top of the bank of the lagoon/storage/retention structure or any overflow structure).

**INNER MANAGEMENT ZONE (IMZ):** means the surface and subsurface area within a drinking water source protection area for a public water system using ground water surrounding a public water supply well(s) that will provide water to the well(s) within one year as delineated or endorsed by the Director under the wellhead protection program and the source water assessment and protection program.

**LAND APPLICATION:** means the placement of manure within the boundaries of a land application site by: 1) spraying or spreading onto the land surface; 2) injection below the land surface in the crop root zone using equipment specifically designed for this purpose; or 3) incorporation into the soil by means of the mixing of manure with the surface soil using standard agricultural practices, such as tillage.



**LARGE CAFO:** means an AFO that stables or confines as many as or more than the numbers of animals specified in any of the following categories: (i) 700 mature dairy cows, whether milked or dry; (ii) 1,000 veal calves; (iii) 1,000 cattle other than mature dairy cows or veal calves. Cattle includes but is not limited to heifers, steers, bulls and cow/calf pairs; (iv) 2,500 swine each weighing 55 pounds or more; (v) 10,000 swine each weighing less than 55 pounds; (vi) 500 horses; (vii) 10,000 sheep or lambs; (viii) 55,000 turkeys; (ix) 30,000 laying hens or broilers, if the AFO uses a liquid manure handling system; (x) 125,000 chickens (other than laying hens), if the AFO uses other than a liquid manure handling system; (xi) 82,000 laying hens, if the AFO uses other than a liquid manure handling system; (xii) 30,000 ducks (if the AFO uses other than a liquid manure handling system); (xiii) 5,000 ducks (if the AFO uses a liquid manure handling system).

**MANURE:** means any of the following wastes used in or resulting from the production of agricultural animals or direct agricultural products such as milk or eggs: animal excreta, discarded products, bedding, litter, process wastewater, process generated wastewater, waste feed, silage drainage and leachate, and compost products resulting from mortality composting or the composting of animal excreta.

**MANURE STORAGE OR TREATMENT FACILITY:** means any excavated, diked, or walled structure or combination of structures designed for the biological stabilization, holding, or storage of manure. This includes all collection ditches, conduits and swales for the collection of runoff from the production area and wastewater that is routed to the manure storage or treatment structure.

**MEDIUM CAFO:** means any AFO with the type and number of animals that fall within any of the ranges listed below and which has been defined or designated as a CAFO. An AFO is defined as a medium CAFO if: (1) The type and number of animals that it stables or confines falls within any of the following ranges: (i) 200-699 mature dairy cows, whether milked or dry; (ii) 300-999 veal calves; (iii) 300-999 cattle other than mature dairy cows or veal calves. Cattle includes but is not limited to heifers, steers, bulls and cow/calf pairs; (iv) 750-2,499 swine each weighing 55 pounds or more; (v) 3,000-9,999 swine each weighing less than 55 pounds; (vi) 150-499 horses; (vii) 3,000-9,999 sheep or lambs; (viii) 16,500-29,999 turkeys; (ix) 9,000-29,999 laying hens or broilers, if the AFO uses a liquid manure handling system; (x) 37,500-124,999 chickens (other than laying hens), if the AFO uses other than a liquid manure handling system; (xi) 25,000-81,999 laying hens, if the AFO uses other than a liquid manure handling system; (xii) 10,000-29,999 ducks, if the AFO uses other than a liquid manure handling system; (xiii) 1,500-4,999 ducks, if the AFO uses a liquid manure handling system and (2) Either one of the following conditions are met: (A) pollutants are discharged into waters of the State through a man-made ditch, flushing system, or other similar man-made device; or (B) pollutants are discharged directly into waters of the State which originate outside of and pass over, across, or through the facility or otherwise come into direct contact with the animals confined in the operation. An AFO may also be designated as a medium CAFO if it discharges by a method other than provided in (A) and (B).

**MULTI-YEAR PHOSPHORUS APPLICATION:** means phosphorus applied to a field in excess of the crop needs for that year. In multi-year phosphorus applications, no additional manure, litter, or process wastewater is applied to the same land in subsequent years until the applied phosphorus has been removed from the field via harvest and crop removal.

**NON-CONTACT COOLING WATER:** means the water used to reduce temperature that does not come into contact with any raw material, intermediate product, waste product (other than heat), or finished product. Non-contact cooling water does not include any process waters or other type of wastewaters, nor is it exposed to anything but the inside of the pipe. Non-contact cooling water shall be free from contaminants (e.g., metals, ammonia, organics, and total dissolved solids) in amounts that exhibit the reasonable potential to cause or contribute to exceedances of Ohio's water quality standards.

**OVERFLOW:** means the discharge of manure resulting from the filling of manure storage structures beyond the point at which no more manure, process wastewater, or storm water can be contained by the structures.

**POLLUTANT:** means the following as defined under 40 CFR 122.2: "dredged spoil, solid waste, incinerator residue, filter back-wash, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials..., heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste discharged into water."

**PROCESS WASTEWATER:** means water directly or indirectly used in the operation of the AFO for any or all of the following: spillage or overflow from animal or poultry watering systems; washing, cleaning or flushing pens, barns, manure pits or other AFO facilities; direct contact swimming, washing, or spray cooling of animals; and dust control. Process wastewater also includes any water which comes into contact with any raw materials, products or byproducts, including manure, litter, feed, milk, eggs or bedding.

**PRODUCTION AREA:** means that part of an AFO that includes the animal confinement area, the manure storage area, the raw materials storage area, and the waste containment areas. The animal confinement area includes but is not limited to open lots, housed lots, feedlots, confinement houses, stall barns, free stall barns, milkrooms, milking centers, cowyards, barnyards, medication pens, walkers, animal walkways, and stables. The manure storage area includes but is not limited to lagoons, runoff ponds, storage sheds, stockpiles, under house or pit storages, liquid impoundments, static piles, and composting piles. The raw materials storage area includes but is not limited to feed silos, silage bunkers, bedding materials, and areas used for storage of pesticides, herbicides, disinfectants, pharmaceuticals, and fertilizers. The waste containment area includes but is not limited to settling basins, and areas within berms and diversions which separate uncontaminated storm water. Also included in the definition of production areas is any egg washing or egg processing facility, and any area used in the storage, handling, treatment or disposal of mortalities.

**PUBLIC WATER SYSTEM (PWS):** means a system which provides water for human consumption through pipes or other constructed conveyances, if such system has at least fifteen service connections or regularly serves an average of at least twenty-five individuals daily at least sixty days out of the year. Such term includes any collection, treatment, storage, and distribution facilities under control of the operator of such system and used primarily in connection with such system, any collection or pretreatment storage facilities not under such control which are primarily in connection with such system, and any water supply system serving an agriculture labor camp, as defined in section 3733.41 of the Revised Code. A public water system is either a community water system or a noncommunity water system. A community water system means a public water system which serves at least fifteen service connections used by year-round residents or regularly serves at least twenty-five year-round residents. A noncommunity water system means a public water system that is not a community water system. A nontransient noncommunity water system means a public water system that is not a community water system and that regularly serves at least twenty-five of the same persons six months per year. A transient noncommunity water system means a noncommunity public water system that does not regularly serve at least twenty-five of the same persons over six months of the year.

**SETBACK:** means a specified distance from surface waters or potential conduits to surface waters where manure, litter, and process wastewater may not be land applied. Examples of conduits to surface waters include but are not limited to: open tile line intake structures, sinkholes, and agriculture wellheads.

**SOURCE WATER ASSESSMENT AND PROTECTION PROGRAM:** means Ohio EPA's source water assessment and protection program based on the Safe Drinking Water Act (88 Stat. 1660, 42 U.S.C. 300(f), as amended in 1996) and approved by U.S. EPA in November 1999.

**SPILL:** means a discharge, usually (but not exclusively) a small, inadvertent discharge of manure, toxic pollutant or hazardous substance, not caused by weather conditions.

**STORM WATER ASSOCIATED WITH INDUSTRIAL ACTIVITY:** means the following under 40 CFR Part 122.26, "discharge from any conveyance that is used for collecting and conveying storm water and that is directly related to manufacturing, processing or raw materials storage areas at an industrial plant. This term includes, but is not limited to, storm water discharges from industrial plant yards; immediate access roads and rail lines used or traveled by carriers of raw materials, manufactured products, waste material, or by-products used or created by the facility; material handling sites; refuse sites; sites used for the application or disposal of process wastewaters (as defined in 40 CFR Part 401); sites used for the storage and maintenance of material handling equipment; sites used for residual treatment, storage, or disposal; shipping and receiving areas; manufacturing buildings; storage areas (including tank farms) for raw materials, and intermediate and final products; and areas where industrial activity has taken place in the past and significant materials remain and are exposed to storm water. Material handling activities include storage, loading and unloading, transportation, or conveyance of any raw product, intermediate product, final product, by-product or waste product. The term excludes areas located on plant lands separate from the plant's industrial activities, such as office buildings and accompanying parking lots as long as the drainage from the excluded areas is not mixed with storm water drained from the above described areas."

**UPSET:** means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment or storage facilities, inadequate treatment or storage facilities, lack of preventative maintenance, or careless or improper operation.

**VEGETATED BUFFER:** means a narrow, permanent strip of dense perennial vegetation established parallel to the contours of and perpendicular to the dominant slope of the field for the purposes of slowing water runoff, enhancing water infiltration, and minimizing the risk of any potential nutrients or pollutants from leaving the field and reaching surface waters.

**WATER QUALITY STANDARDS:** defined in 40 CFR 130.2(d) as: "Provisions of State or Federal law which consist of a designated use or uses for the waters of the United States and water quality criteria for such waters based upon such uses. Water quality standards are to protect the public health or welfare, enhance the quality of water and serve the purposes of the Clean Water Act." The State of Ohio's water quality standards are contained in Ohio Administrative Code (OAC) 3745-1.



**WATERS OF THE STATE:** defined in Rule ORC 6111.01(H) as: "means all streams, lakes, ponds, marshes, watercourses, waterways, wells, springs, irrigation systems, drainage systems, and all other bodies or accumulations of water, surface and underground, natural or artificial, regardless of the depth of the strata in which underground water is located, which are situated wholly or partly within, or border upon, this state, or are within its jurisdiction, except those private waters which do not combine or effect a junction with natural surface or underground waters."

**WELLHEAD PROTECTION PROGRAM:** means Ohio EPA's wellhead protection program based on the Safe Drinking Water Act (88 Stat. 1660, 42 U.S.C. 300(f), as amended in 1996) and approved by U.S. EPA in November 1992.

## 5. STATION DESCRIPTION.

Description of the location of the required sampling station is as follows:

2IK00023601- Inlet to the outfall discharge pipe from water treatment unit prior to discharging to the unnamed tributary of West Branch Tontogany Creek.

**Exemption 6**

2IK00023901- Storm Water Monitoring: Inlet to the outfall discharge pipe from the storm water pond prior to discharging to the unnamed tributary of West Branch Tontogany Creek.

**Exemption 6**

Part I, B. - MONITORING REQUIREMENTS

1. Storm Water Monitoring. During the period beginning upon the completion of construction activities and expansion of operations in accordance with the Permit-to-Install issued by ODA on July 13, 2009, the permittee shall monitor the Clean Storm Water Detention Basin Outfall at Station Number 2IK00023901, and report to the Ohio EPA in accordance with the following table. See Part I, A, 5 for location of sampling.

Table - Downstream-Nearfield Monitoring - Final

Effluent Characteristic	Discharge Limitations							Monitoring Requirements		
	Concentration Specified Units				Loading* kg/day			Measuring Frequency	Sampling Type	Monitoring Months
	Maximum	Minimum	Weekly	Monthly	Daily	Weekly	Monthly			
00045 - Total Precipitation - Inches	-	-	-	-	-	-	-	Continuous	24hr Total	Semi-annual - 5
00056 - Flow Rate - GPD	-	-	-	-	-	-	-	2/Year	Estimate	Semi-annual - 5
00310 - Biochemical Oxygen Demand, 5 Day - mg/l	-	-	-	-	-	-	-	2/Year	Grab	Semi-annual - 5
00400 - pH - S.U.	9.0	6.5	-	-	-	-	-	2/Year	Grab	Semi-annual - 5
00610 - Nitrogen, Ammonia (NH3) - mg/l	-	-	-	-	-	-	-	2/Year	Grab	Semi-annual - 5
00665 - Phosphorus, Total (P) - mg/l	-	-	-	-	-	-	-	2/Year	Grab	Semi-annual - 5

NOTES for Station Number 2IK00023901:

Discharge Monitoring Reports (DMRs) for this Station must be submitted for the months of May and November.

a. PARAMETER 00045 - Total Precipitation shall be reported for at least two days prior to the sampling event as well as the day of the sampling event.

b. PARAMETERS 00310 - BOD5, 00610 - Ammonia, and 00665 - Total Phosphorus shall be monitored and reported twice per year (2/Year) during the months of May and November during wet weather when the storm water detention basin is discharging. The exact day/time of monitoring shall be determined in the field by the operator provided that the samples are collected by grab sample from the detention basin outlet during a storm event that is greater than 0.1 inches in magnitude and that occurs at least 72 hours from the previously measureable (greater than 0.1 inch rainfall) storm event but no greater than the 25-year, 24-hour storm event. The grab samples shall be taken during the first thirty (30) minutes of the rainfall event. If collection of a grab sample during the first thirty (30) minutes is impractical, a grab sample can be taken during the first hour of the rainfall event, and the permittee shall submit with the monitoring report a description of why a grab sample during the first thirty minutes was impractical.

- c. PARAMETERS 00056 - Flow Rate and 00400 - pH shall be monitored and reported twice per year (2/year) during the months of May and November when the non-contact cooling water is discharging into the the clean storm water detention basin.
- d. Grab samples shall be collected at such times and locations, and in such a fashion, as to be representative of storm water discharges from the facility.
- e. For the period of time prior to the installation of the storm water detention basin, e-DMR submittals for this station should indicate that there has been no discharge by marking the "No Discharge" checkbox at the top of the e-DMR form.

2. Water Treatment Back Flush Water Monitoring. During the period beginning on the modification effective date of this permit and lasting until the modification expiration date, the permittee shall monitor the Water Treatment Back Flush Water Outfall at Station Number 2IK00023601, and report to the Ohio EPA in accordance with the following table. See Part I, A, 5 for location of sampling.

Table - Downstream-Nearfield Monitoring - Final - Interim - 601 - Interim

Effluent Characteristic  Parameter	Discharge Limitations							Monitoring Requirements		
	Concentration Specified Units		Loading* kg/day					Measuring Frequency	Sampling Type	Monitoring Months
	Maximum	Minimum	Weekly	Monthly	Daily	Weekly	Monthly			
00056 - Flow Rate - GPD	-	-	-	-	-	-	-	2/Year	Grab	March and Sep.
00400 - pH - S.U.	9.0	6.5	-	-	-	-	-	2/Year	Grab	March and Sep.
00530 - Total Suspended Solids - mg/l	-	-	-	-	-	-	-	2/Year	Grab	March and Sep.
00610 - Nitrogen, Ammonia (NH3) - mg/l	-	-	-	-	-	-	-	2/Year	Grab	March and Sep.
70300 - Residue, Total Filterable - mg/l	-	-	-	-	-	-	-	2/Year	Grab	March and Sep.

NOTES for Station Number 2IK00023601:

Discharge Monitoring Reports (DMRs) for this Station must be submitted for the months of March and September.

a. PARAMETERS 00056 - Flow Rate, 00400 - pH, 00530 - Total Suspended Solids, 00610 - Ammonia, and 70300 - Total Filterable Residue shall be monitored and reported twice per year (2/year) during the months of March and September when the water treatment back flush water is discharging into the unnamed tributary of West Branch Tontogany Creek.

b. Monitoring data required by this permit must be submitted to Ohio EPA using the electronic Discharge Monitoring Report (e-DMR) internet application.

Please view the following web page for more information: <http://www.epa.ohio.gov/dsw/edmr/eDMR.aspx>

c. If water treatment back flush water is not discharged into the unnamed tributary of West Branch Tontogany Creek at any time in March or September then the "No Discharge" checkbox at the top of the e-DMR form shall be marked.

Part I, C - SCHEDULE OF COMPLIANCE

1. MANURE MANAGEMENT PLAN

A. As soon as possible, but no later than July 19, 2012, **Exemption 6** Dairy LLC must develop and begin implementation of an updated Manure Management Plan that is created in accordance with this permit and which meets the requirements of the 2008 Federal CAFO Rule. **Exemption 6** Dairy LLC shall take the actions described below as expeditiously as practicable, but no later than the dates set in accordance with the following schedule.

(1) As soon as possible but no later than May 1, 2010, **Exemption 6** Dairy LLC shall submit to Ohio EPA, Central Office, Division of Surface Water the results of the most recent soil tests for the fields used for land application of manure by **Exemption 6** Dairy LLC and which are listed within the Manure Management Plan utilized by **Exemption 6** Dairy LLC. <Event Code 5699>

(2) As soon as possible but no later than January 19, 2012, **Exemption 6** Dairy LLC shall begin development of an updated Manure Management Plan which meets the requirements of the 2008 Federal CAFO Rule and this permit. It is acceptable to develop the Manure Management Plan which would be included as part of a renewal of the Permit-to-Operate issued to **Exemption 6** Dairy LLC by the Ohio Department of Agriculture. Written affirmation of the status of the Manure Management Plan development and an outline of steps needed to develop the updated Manure Management Plan shall be submitted to Ohio EPA, Central Office, Division of Surface Water within one week of this deadline. <Event Code 95999>

(3) As soon as possible but no later than June 19, 2012, the updated Manure Management Plan shall be submitted to Ohio EPA, Central Office, Division of Surface Water for review and availability to the public. Ohio EPA will notify the permittee in writing if the submitted plan meets the minimum requirements of this permit and/or detail required modifications. <Event Code 1299>

(4) As soon as possible but no later than July 19, 2012, the final version of the updated Manure Management Plan shall be implemented. <Event Code 5699>



## Part II, OTHER REQUIREMENTS

A. This NPDES permit applies to the storage, collection, treatment, handling, and disposal/land application of manure, management of storm water associated with industrial activity, and discharge of water treatment back flush water associated with **Exemption 6** Dairy LLC, which is currently designed to confine a maximum of **Exemption 6** mature dairy cattle. The dairy has been approved by the Ohio Department of Agriculture to expand to a maximum of **Exemption 6** mature dairy cattle. This operation shall not be expanded above **Exemption 6** cows, or to encompass more land to be included in the production area, until Ohio EPA has been notified in writing of the intended actions. A modified NPDES permit (and updated Manure Management Plan) reflecting the expansion will be required for significant changes (e.g., greater than 10 percent increase in animals confined). For Manure Management Plan changes, see Part II, J.

Should **Exemption 6** Dairy LLC confine more than **Exemption 6** mature dairy cattle but less than **Exemption 6** mature dairy cattle, Ohio EPA shall be notified and construction shall be completed in accordance with the Permit-to-Install issued to **Exemption 6** Dairy LLC by the Ohio Department of Agriculture on July 19, 2009.

B. The discharge of manure or other wastes to waters of the State as defined in ORC 6111.01 and which include surface waters, wetlands (not including constructed treatment wetlands), and ditches is prohibited except in compliance with this permit.

C. Spill prevention and good housekeeping techniques, along with diversion of clean water, shall be used to ensure that uncontained storm water from the production area is not contaminated by manure and to ensure that storm water discharges from the following areas maintain compliance with Ohio Water Quality Standards in the receiving waters of the State: immediate access roads and rail lines used or traveled by carriers or raw materials, products, waste material, or by-products used or created by the CAFO; refuse sites; sites used for the storage and maintenance of material handling equipment; and shipping and receiving areas. Storm water that is contaminated by manure or raw material (such as silage) is process wastewater, which is included in the definition of manure in Part 1, A, 4, and may only be discharged in accordance with Part I, A of this permit.

D. **Exemption 6** Dairy LLC shall maintain the manure storage or treatment facilities (including regular solids removal) to ensure that the design storage volume is provided, as approved by Ohio EPA or ODA or necessary to achieve compliance with this permit, whichever is greater. See Part VII.

E. For all open manure storage or treatment structures, a minimum freeboard of one foot must be maintained at all times. This is in addition to the capacity needed to contain direct precipitation and runoff from the 100-year, 24-hour storm. These structures must be equipped with a depth marker which clearly indicates the minimum capacity to contain the runoff and precipitation of the 100-year, 24-hour storm event. If this freeboard is violated, **Exemption 6** Dairy LLC shall immediately begin investigating removal options. See Part VII, Production Area Requirements.

F. The permittee shall give advance notice to Ohio EPA of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

G. The permittee (or employee(s) appointed by the owner/operator) shall attend a manure management and water quality protection training and/or seminar at least once per year. Examples of training/seminars include Ohio State University Extension Manure Science Review, participation in the Livestock Environmental Assurance Program (LEAP), and Ohio Department of Agriculture's Certified Livestock Manager training. The permittee shall maintain documentation of training/seminar attendance in the facility records and submit a copy with the annual report. See Part II, K.

H. The permittee shall be responsible for proper operation and maintenance of the manure storage, treatment, or disposal system.

I. Any variation from the operational practices included in this NPDES permit must be authorized by Ohio EPA in advance.

#### J. Manure Management Plans

With the exception of Insect and Rodent Control Plans, the Manure Management Plan (MMP) included within the Permit-to-Operate issued by the Ohio Department of Agriculture on July 19, 2007, reviewed, and approved by the Director through issuance of this NPDES permit is incorporated as a condition of this NPDES permit.

##### 1. SIGNATURE AND PLAN REVIEW

- a. The plan shall be retained onsite at the CAFO.
- b. The Director may notify the permittee at any time that the plan does not meet one or more of the minimum requirements of this permit. Within 30 days of such notification from the Director, the permittee shall make the required changes to the plan and shall submit to the Director a revised plan demonstrating that the requested changes have been made.

##### 2. KEEPING PLANS CURRENT

The permittee shall amend the plan prior to a change in design, construction, operation, or maintenance, which has an effect on the potential for the discharge of pollutants to the surface waters of the State or if the MMP proves to be ineffective in eliminating or minimizing pollutants from sources identified under Part I, A, 3, or otherwise achieving the general objectives of minimizing pollutant discharges associated with the CAFO.

When a permittee proposes to make changes to the MMP previously submitted to and approved by the Director, the permittee shall provide the Director with the most current version of the MMP and identify changes from the previous version in a cover letter prior to implementation of the changes. The results of calculations made in accordance with Part II, J, 4 are not subject to this notification requirement.

The Director will review the revised MMP to ensure that it meets the requirements of this permit and will determine whether the changes to the MMP necessitate revision to the terms of the MMP incorporated into this permit. If no revision is necessary, the Director will notify the permittee and upon such notification the permittee shall implement the revised plan. If revision to the terms of the MMP is necessary, the Director will follow the applicable modification process in 40 CFR Part 122.42(e)(6)(A) to revise the terms of the MMP incorporated into this permit. Modified MMP submittals with substantial changes are subject to a 30-day public notification period on the Ohio EPA website.

Examples of substantial changes to a MMP requiring a permit modification include, but are not limited to:

- a. Addition of new land application areas not previously included in the MMP;
- b. Any changes to the field-specific maximum annual rates for land application and to the maximum amounts of nitrogen and phosphorus derived from all sources for each crop;
- c. Addition of any crop or other uses not included in the MMP and corresponding field-specific rates of application; and
- d. Changes to site-specific components of the MMP, where such changes are likely to increase the risk of nitrogen and phosphorus transport to waters of the State.

### 3. CONTENTS OF PLAN

The manure management plan shall address the form, source, amount, timing, agronomic rate, and method of application of nutrients to each field to achieve compliance with this permit, ensure appropriate agricultural utilization of the nutrients, and minimize movement of pollutants to surface waters. To the extent applicable, the MMP shall address the following:

- a. Storage of manure, management of mortalities, diversion of clean water, prevention of contact of animals with waters of the State, and proper chemical handling to ensure compliance with Part I, A, 1, Part II, and Part VII of this permit.
- b. Inspections, monitoring, and maintenance activities for structures and equipment involved in manure handling and storage in compliance with Part II and Part VII, Production Area Requirements of this permit.
- c. If applicable, a manure land application plan that will be implemented to comply with Part VII of this permit, including: 1) a total nutrient budget; 2) manure and soil characterizations; 3) application methods and timing that will minimize nutrient transport to waters of the State; and 4) field specific agronomic application rates.
- d. If applicable, a manure distribution and utilization plan including: 1) total nutrient budget; 2) manure characterization; and 3) manure removal methods and timing that will minimize nutrient transport to waters of the State.
- e. Site specific conservation practices to be implemented, including as appropriate buffers or equivalent practices, to control runoff of pollutants to waters of the State.

### 4. ANNUAL CALCULATIONS

The permittee shall calculate the maximum amount of manure to be land applied at least once each year using the results of the most recent representative manure tests for nitrogen and phosphorus taken within twelve months of the date of land application. The results shall be submitted to Ohio EPA by January 31 of each year as part of the Annual Report. See Part II, K.

## 5. ANNUAL REVIEW

The annual review and update shall include field-specific information that identifies when manure will be applied, where manure will be applied, the method of application, and how much manure will be applied to each field during the following growing season, except where manure ownership is transferred. The permittee shall annually review the MMP for the following:

1. Manure sources or amounts.
2. Manure nutrient content.
3. Methods of application.
4. Fields used for application.
5. Crop rotations.
6. Expected crop yields.
7. Soil test results.
8. Manure storage practices.
9. Other management changes which affect the available nutrient amounts, crop nutrient needs, setbacks, or production area operation and maintenance.

K. ANNUAL REPORT: By January 31 of each year, the permittee shall submit an annual report to Ohio EPA, Central Office, Division of Surface Water. The annual report shall be submitted on forms prepared by the Director and shall include, but not necessarily be limited to, the following:

1. The number and type of animals confined in the previous year.
2. Estimated amount of manure generated in the previous year in gallons or tons.
3. Total amount of manure removed from the facility for land application and/or distribution or utilization in gallons or tons.
4. Total number of acres for land application covered by the MMP.
5. Total number of acres under the control of the permittee that were used for land application in the previous year.
6. Manure distribution or utilization records.
7. Summary of the number of discharges from the production area and the number of discharges from land application areas that were not composed of agricultural storm water runoff for the past year, including date, time and approximate volumes.
8. Information on any non-compliance not previously reported to Ohio EPA. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.
9. A statement indicating if the MMP was developed by a certified manure management planner.
10. A copy of the training/seminar attendance documentation required by Part II, G of this permit.
11. The actual crop(s) planted and actual yield(s) for each field, the actual nitrogen and phosphorus content of the manure, the results of calculations conducted in accordance with Part II, J, 4, and the amount of manure applied to each field during the previous twelve months.

L. Distribution and Utilization: For manure that is distributed to other persons (per Part VII, B, 6 of this permit), the permittee shall record the recipient's name and address, the approximate amount of manure transferred to that recipient, and the date of the transfer. The permittee shall provide the most current manure nutrient analysis to the recipient. If the permittee is notified by Ohio EPA, Ohio Department of Agriculture, or Ohio Department of Natural Resources, or otherwise becomes aware that the recipient is not in compliance with ORC 6111 (e.g., causing a nonexempt discharge of manure to waters of the State), the permittee shall cease providing manure to the recipient until written authorization to continue is provided by Ohio EPA.

#### OPERATION/MANAGEMENT PRACTICES

M. The manure handling equipment shall be effectively maintained and operated at all times so that there is no discharge to waters of the State, except in compliance with Part I, A. In the event that the equipment fails to perform satisfactorily, including the creation of nuisance conditions or failure of an application area to adequately assimilate the manure, the permittee shall take immediate corrective actions including those actions that may be required by Ohio EPA, such as the acquisition of equipment capable of properly applying manure in the proper approved amounts in accordance with this permit.

N. In the event that this facility is closed for production purposes or is no longer a CAFO, this permit shall remain effective until the permittee demonstrates to the satisfaction of the Director that there is no remaining potential for a discharge of manure that was generated while the operation was a CAFO, other than agricultural storm water from land application areas. All manure shall be properly disposed of, and in the case of facility closure, the manure storage or treatment facilities shall be properly closed.

O. A protective vegetative cover shall be established and maintained on all earthen basin embankments (outside toe of embankment to maximum operating elevation), berms, pipe runs, erosion control areas, and surface water diversions. Trees, shrubs, and other woody vegetation shall not be allowed to grow on the earthen basin, dikes, or embankments. Earthen basin embankment areas shall be kept mowed or otherwise controlled and accessible.

P. Adequate manure storage volume shall be provided and maintained to prevent the necessity of land applying manure on frozen and/or snow covered ground. No later than September 15 of each year, the permittee shall evaluate the storage capacity in their manure storage or treatment facilities and determine what steps are needed to avoid the need to land apply manure on frozen or snow covered fields for the upcoming winter. For example, a CAFO should plan to have at least four months of storage capacity available by December 1. The operating record for the facility shall include documentation of the storage level as well as what is considered in this evaluation, and what actions were taken to avoid the need for land application of manure on frozen or snow covered ground. Failure to perform the evaluation or failure to take action if the evaluation indicated that action was necessary to avoid land application on frozen or snow covered ground shall be considered a violation of this permit. See Part VII, B, 5.



Q. A rain gauge shall be kept on site at the CAFO and properly maintained. A log of all measurable rainfall events shall be kept with the Manure Management Plan.

R. All records required by this permit including documentation of inspections and manure land application must be retained by the permittee for a period of five years from the date of the documented activity. This includes a complete copy of the information required by 40 CFR 122.21(i)(1) and 40 CFR 122.42 (e)(2) and the records specified in paragraphs (b)(1) through (b)(6) of 40 CFR 412.37.

S. This permit shall be modified, or alternatively, revoked and reissued, to comply with any applicable effluent standard or limitation issued or approved under Sections 301(b)(2)(C) and (D), 304(b)(2), and 307(a)(2) of the Clean Water Act, if the effluent standard or limitation so issued or approved.

1. Contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or
2. Controls any pollutant not limited in the permit.

The permit as modified or reissued under this paragraph shall also contain any other requirements of the Act then applicable.

T. In the event that the permittee's operation requires the use of cooling or boiler water treatment additives that are discharged to surface waters of the State, written permission must be obtained from the director of the Ohio EPA prior to use. Reporting and testing requirements to apply for permission to use additives can be obtained from the Ohio EPA, Central Office, Division of Surface Water, Additive Approval. Reported information will be used to evaluate whether the use of the additive(s) at concentrations expected in the final discharge will be harmful or inimical to aquatic life.

U. Final permit limitations based on preliminary or approved waste load allocations are subject to change based on modifications to or finalization of the allocation or report or changes to Water Quality Standards. Monitoring requirements and/or special conditions of this permit are subject to change based on regulatory or policy changes.

V. Grab samples shall be collected at such times and locations, and in such fashion, as to be representative of the facility's performance.

### PART III - GENERAL CONDITIONS

#### 1. DEFINITIONS

"Daily discharge" means the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in units of mass, the "daily discharge" is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the "daily discharge" is calculated as the average measurement of the pollutant over the day.

"Average weekly" discharge limitation means the highest allowable average of "daily discharges" over a calendar week, calculated as the sum of all "daily discharges" measured during a calendar week divided by the number of "daily discharges" measured during that week. Each of the following 7-day periods is defined as a calendar week: Week 1 is Days 1 - 7 of the month; Week 2 is Days 8 - 14; Week 3 is Days 15 - 21; and Week 4 is Days 22 - 28. If the "daily discharge" on days 29, 30 or 31 exceeds the "average weekly" discharge limitation, Ohio EPA may elect to evaluate the last 7 days of the month as Week 4 instead of Days 22 - 28. Compliance with fecal coliform bacteria or E coli bacteria limitations shall be determined using the geometric mean.

"Average monthly" discharge limitation means the highest allowable average of "daily discharges" over a calendar month, calculated as the sum of all "daily discharges" measured during a calendar month divided by the number of "daily discharges" measured during that month. Compliance with fecal coliform bacteria or E coli bacteria limitations shall be determined using the geometric mean.

"85 percent removal" means the arithmetic mean of the values for effluent samples collected in a period of 30 consecutive days shall not exceed 15 percent of the arithmetic mean of the values for influent samples collected at approximately the same times during the same period.

"Absolute Limitations" Compliance with limitations having descriptions of "shall not be less than," "nor greater than," "shall not exceed," "minimum," or "maximum" shall be determined from any single value for effluent samples and/or measurements collected.

"Net concentration" shall mean the difference between the concentration of a given substance in a sample taken of the discharge and the concentration of the same substances in a sample taken at the intake which supplies water to the given process. For the purpose of this definition, samples that are taken to determine the net concentration shall always be 24-hour composite samples made up of at least six increments taken at regular intervals throughout the plant day.

"Net Load" shall mean the difference between the load of a given substance as calculated from a sample taken of the discharge and the load of the same substance in a sample taken at the intake which supplies water to given process. For purposes of this definition, samples that are taken to determine the net loading shall always be 24-hour composite samples made up of at least six increments taken at regular intervals throughout the plant day.

"MGD" means million gallons per day.

"mg/l" means milligrams per liter.

"ug/l" means micrograms per liter.

"ng/l" means nanograms per liter.

"S.U." means standard pH unit.

"kg/day" means kilograms per day.

"Reporting Code" is a five digit number used by the Ohio EPA in processing reported data. The reporting code does not imply the type of analysis used nor the sampling techniques employed.

"Quarterly (1/Quarter) sampling frequency" means the sampling shall be done in the months of March, June, August, and December, unless specifically identified otherwise in the Effluent Limitations and Monitoring Requirements table.

"Yearly (1/Year) sampling frequency" means the sampling shall be done in the month of September, unless specifically identified otherwise in the effluent limitations and monitoring requirements table.

"Semi-annual (2/Year) sampling frequency" means the sampling shall be done during the months of June and December, unless specifically identified otherwise.

"Winter" shall be considered to be the period from November 1 through April 30.

"Bypass" means the intentional diversion of waste streams from any portion of the treatment facility.

"Summer" shall be considered to be the period from May 1 through October 31.

"Severe property damage" means substantial physical damage to property, damage to the treatment facilities which would cause them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

"Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

"Sewage sludge" means a solid, semi-solid, or liquid residue generated during the treatment of domestic sewage in a treatment works as defined in section 6111.01 of the Revised Code. "Sewage sludge" includes, but is not limited to, scum or solids removed in primary, secondary, or advanced wastewater treatment processes. "Sewage sludge" does not include ash generated during the firing of sewage sludge in a sewage sludge incinerator, grit and screenings generated during preliminary treatment of domestic sewage in a treatment works, animal manure, residue generated during treatment of animal manure, or domestic septage.

"Sewage sludge weight" means the weight of sewage sludge, in dry U.S. tons, including admixtures such as liming materials or bulking agents. Monitoring frequencies for sewage sludge parameters are based on the reported sludge weight generated in a calendar year (use the most recent calendar year data when the NPDES permit is up for renewal).

"Sewage sludge fee weight" means the weight of sewage sludge, in dry U.S. tons, excluding admixtures such as liming materials or bulking agents. Annual sewage sludge fees, as per section 3745.11(Y) of the Ohio Revised Code, are based on the reported sludge fee weight for the most recent calendar year.

## 2. GENERAL EFFLUENT LIMITATIONS

The effluent shall, at all times, be free of substances:

- A. In amounts that will settle to form putrescent, or otherwise objectionable, sludge deposits; or that will adversely affect aquatic life or water fowl;
- B. Of an oily, greasy, or surface-active nature, and of other floating debris, in amounts that will form noticeable accumulations of scum, foam or sheen;
- C. In amounts that will alter the natural color or odor of the receiving water to such degree as to create a nuisance;
- D. In amounts that either singly or in combination with other substances are toxic to human, animal, or aquatic life;
- E. In amounts that are conducive to the growth of aquatic weeds or algae to the extent that such growths become inimical to more desirable forms of aquatic life, or create conditions that are unsightly, or constitute a nuisance in any other fashion;
- F. In amounts that will impair designated instream or downstream water uses.

## 3. FACILITY OPERATION AND QUALITY CONTROL

All wastewater treatment works shall be operated in a manner consistent with the following:

- A. At all times, the permittee shall maintain in good working order and operate as efficiently as possible all treatment or control facilities or systems installed or used by the permittee necessary to achieve compliance with the terms and conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with conditions of the permit.
- B. The permittee shall effectively monitor the operation and efficiency of treatment and control facilities and the quantity and quality of the treated discharge.
- C. Maintenance of wastewater treatment works that results in degradation of effluent quality shall be scheduled during non-critical water quality periods and shall be carried out in a manner approved by Ohio EPA as specified in the Paragraph in the PART III entitled, "UNAUTHORIZED DISCHARGES".

#### 4. REPORTING

A. Monitoring data required by this permit shall be submitted on Ohio EPA 4500 Discharge Monitoring Report (DMR) forms using the electronic DMR (e-DMR) internet application. e-DMR allows permitted facilities to enter, sign, and submit DMRs on the internet. e-DMR information is found on the following web page:

<http://www.epa.ohio.gov/dsw/edmr/eDMR.aspx>

Alternatively, if you are unable to use e-DMR due to a demonstrated hardship, monitoring data may be submitted on paper DMR forms provided by Ohio EPA. Monitoring data shall be typed on the forms. Please contact Ohio EPA, Division of Surface Water at (614) 644-2050 if you wish to receive paper DMR forms.

B. DMRs shall be signed by a facility's Responsible Official or a Delegated Responsible Official (i.e. a person delegated by the Responsible Official). The Responsible Official of a facility is defined as:

1. For corporations - a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision making functions for the corporation; or the manager of one or more manufacturing, production or operating facilities, provided the manager is authorized to make management decisions which govern the operation of the regulated facility including having explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long-term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;
2. For partnerships - a general partner;
3. For a sole proprietorship - the proprietor; or,
4. For a municipality, state or other public facility - a principal executive officer, a ranking elected official or other duly authorized employee.

For e-DMR, the person signing and submitting the DMR will need to obtain an eBusiness Center account and Personal Identification Number (PIN). Additionally, Delegated Responsible Officials must be delegated by the Responsible Official, either on-line using the eBusiness Center's delegation function, or on a paper delegation form provided by Ohio EPA. For more information on the PIN and delegation processes, please view the following web page:

<http://www.epa.ohio.gov/dsw/edmr/eDMRpin.aspx>

C. DMRs submitted using e-DMR shall be submitted to Ohio EPA by the 20th day of the month following the month-of-interest. DMRs submitted on paper must include the original signed DMR form and shall be mailed to Ohio EPA at the following address so that they are received no later than the 15th day of the month following the month-of-interest:

Ohio Environmental Protection Agency  
Lazarus Government Center  
Division of Surface Water - PCU  
P.O. Box 1049  
Columbus, Ohio 43216-1049



D. Regardless of the submission method, a paper copy of the submitted Ohio EPA 4500 DMR shall be maintained onsite for records retention purposes (see Section 7. RECORDS RETENTION). For e-DMR users, view and print the DMR from the Submission Report Information page after each original or revised DMR is submitted. For submittals on paper, make a copy of the completed paper form after it is signed by a Responsible Official or a Delegated Responsible Official.

E. If the permittee monitors any pollutant at the location(s) designated herein more frequently than required by this permit, using approved analytical methods as specified in Section 5. SAMPLING AND ANALYTICAL METHODS, the results of such monitoring shall be included in the calculation and reporting of the values required in the reports specified above.

F. Analyses of pollutants not required by this permit, except as noted in the preceding paragraph, shall not be reported to the Ohio EPA, but records shall be retained as specified in Section 7. RECORDS RETENTION.

#### 5. SAMPLING AND ANALYTICAL METHOD

Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored flow. Test procedures for the analysis of pollutants shall conform to regulation 40 CFR 136, "Test Procedures For The Analysis of Pollutants" unless other test procedures have been specified in this permit. The permittee shall periodically calibrate and perform maintenance procedures on all monitoring and analytical instrumentation at intervals to insure accuracy of measurements.

#### 6. RECORDING OF RESULTS

For each measurement or sample taken pursuant to the requirements of this permit, the permittee shall record the following information:

- A. The exact place and date of sampling; (time of sampling not required on EPA 4500)
- B. The person(s) who performed the sampling or measurements;
- C. The date the analyses were performed on those samples;
- D. The person(s) who performed the analyses;
- E. The analytical techniques or methods used; and
- F. The results of all analyses and measurements.

## 7. RECORDS RETENTION

The permittee shall retain all of the following records for the wastewater treatment works for a minimum of three years except those records that pertain to sewage sludge disposal, use, storage, or treatment, which shall be kept for a minimum of five years, including:

- A. All sampling and analytical records (including internal sampling data not reported);
- B. All original recordings for any continuous monitoring instrumentation;
- C. All instrumentation, calibration and maintenance records;
- D. All plant operation and maintenance records;
- E. All reports required by this permit; and
- F. Records of all data used to complete the application for this permit for a period of at least three years, or five years for sewage sludge, from the date of the sample, measurement, report, or application.

These periods will be extended during the course of any unresolved litigation, or when requested by the Regional Administrator or the Ohio EPA. The three year period, or five year period for sewage sludge, for retention of records shall start from the date of sample, measurement, report, or application.

## 8. AVAILABILITY OF REPORTS

Except for data determined by the Ohio EPA to be entitled to confidential status, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the appropriate district offices of the Ohio EPA. Both the Clean Water Act and Section 6111.05 Ohio Revised Code state that effluent data and receiving water quality data shall not be considered confidential.

## 9. DUTY TO PROVIDE INFORMATION

The permittee shall furnish to the Director, within a reasonable time, any information which the Director may request to determine whether cause exists for modifying, revoking, and reissuing, or terminating the permit, or to determine compliance with this permit. The permittee shall also furnish to the Director, upon request, copies of records required to be kept by this permit.

## 10. RIGHT OF ENTRY

The permittee shall allow the Director or an authorized representative upon presentation of credentials and other documents as may be required by law to:

- A. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit.
- B. Have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit.
- C. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit.
- D. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act, any substances or parameters at any location.

## 11. UNAUTHORIZED DISCHARGES

A. Bypass Not Exceeding Limitations - The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraphs 11.B and 11.C.

### B. Notice

1. Anticipated Bypass - If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least ten days before the date of the bypass.

2. Unanticipated Bypass - The permittee shall submit notice of an unanticipated bypass as required in paragraph 12.B (24 hour notice).

### C. Prohibition of Bypass

1. Bypass is prohibited, and the Director may take enforcement action against a permittee for bypass, unless:

- a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
- b. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and

c. The permittee submitted notices as required under paragraph 11.B.

2. The Director may approve an anticipated bypass, after considering its adverse effects, if the Director determines that it will meet the three conditions listed above in paragraph 11.C.1.

## 12. NONCOMPLIANCE NOTIFICATION

### A. Exceedance of a Daily Maximum Discharge Limit

1. The permittee shall report noncompliance that is the result of any violation of a daily maximum discharge limit for any of the pollutants listed by the Director in the permit by e-mail or telephone within twenty-four (24) hours of discovery.

The permittee may report to the appropriate Ohio EPA district office e-mail account as follows (this method is preferred):

Southeast District Office: sedo24hournpdes@epa.state.oh.us  
Southwest District Office: swdo24hournpdes@epa.state.oh.us  
Northwest District Office: nwdo24hournpdes@epa.state.oh.us  
Northeast District Office: nedo24hournpdes@epa.state.oh.us  
Central District Office: cdo24hournpdes@epa.state.oh.us  
Central Office: co24hournpdes@epa.state.oh.us

The permittee shall attach a noncompliance report to the e-mail. A noncompliance report form is available on the following web site:

<http://www.epa.ohio.gov/dsw/permits/permits.aspx>

Or, the permittee may report to the appropriate Ohio EPA district office by telephone toll-free between 8:00 AM and 5:00 PM as follows:

Southeast District Office: (800) 686-7330  
Southwest District Office: (800) 686-8930  
Northwest District Office: (800) 686-6930  
Northeast District Office: (800) 686-6330  
Central District Office: (800) 686-2330  
Central Office: (614) 644-2001

The permittee shall include the following information in the telephone noncompliance report:

- a. The name of the permittee, and a contact name and telephone number;
- b. The limit(s) that has been exceeded;
- c. The extent of the exceedance(s);
- d. The cause of the exceedance(s);
- e. The period of the exceedance(s) including exact dates and times;
- f. If uncorrected, the anticipated time the exceedance(s) is expected to continue; and,
- g. Steps taken to reduce, eliminate or prevent occurrence of the exceedance(s).

**B. Other Permit Violations**

1. The permittee shall report noncompliance that is the result of any unanticipated bypass resulting in an exceedance of any effluent limit in the permit or any upset resulting in an exceedance of any effluent limit in the permit by e-mail or telephone within twenty-four (24) hours of discovery.

The permittee may report to the appropriate Ohio EPA district office e-mail account as follows (this method is preferred):

Southeast District Office: sedo24hournpdes@epa.state.oh.us  
Southwest District Office: swdo24hournpdes@epa.state.oh.us  
Northwest District Office: nwdo24hournpdes@epa.state.oh.us  
Northeast District Office: nedo24hournpdes@epa.state.oh.us  
Central District Office: cdo24hournpdes@epa.state.oh.us  
Central Office: co24hournpdes@epa.state.oh.us

The permittee shall attach a noncompliance report to the e-mail. A noncompliance report form is available on the following web site:

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Northwest District Office: (800) 686-6930  
Northeast District Office: (800) 686-6330  
Central District Office: (800) 686-2330  
Central Office: (614) 644-2001

The permittee shall include the following information in the telephone noncompliance report:

- a. The name of the permittee, and a contact name and telephone number;
  - b. The time(s) at which the discharge occurred, and was discovered;
  - c. The approximate amount and the characteristics of the discharge;
  - d. The stream(s) affected by the discharge;
  - e. The circumstances which created the discharge;
  - f. The name and telephone number of the person(s) who have knowledge of these circumstances;
  - g. What remedial steps are being taken; and,
  - h. The name and telephone number of the person(s) responsible for such remedial steps.
2. The permittee shall report noncompliance that is the result of any spill or discharge which may endanger human health or the environment within thirty (30) minutes of discovery by calling the 24-Hour Emergency Hotline toll-free at (800) 282-9378. The permittee shall also report the spill or discharge by e-mail or telephone within twenty-four (24) hours of discovery in accordance with B.1 above.
- C. When the telephone option is used for the noncompliance reports required by A and B, the permittee shall submit to the appropriate Ohio EPA district office a confirmation letter and a completed noncompliance report within five (5) days of the discovery of the noncompliance. This follow up report is not necessary for the e-mail option which already includes a completed noncompliance report.
- D. If the permittee is unable to meet any date for achieving an event, as specified in a schedule of compliance in their permit, the permittee shall submit a written report to the appropriate Ohio EPA district office within fourteen (14) days of becoming aware of such a situation. The report shall include the following:
1. The compliance event which has been or will be violated;
  2. The cause of the violation;
  3. The remedial action being taken;
  4. The probable date by which compliance will occur; and,
  5. The probability of complying with subsequent and final events as scheduled.
- E. The permittee shall report all other instances of permit noncompliance not reported under paragraphs A or B of this section on their monthly DMR submission. The DMR shall contain comments that include the information listed in paragraphs A or B as appropriate.
- F. If the permittee becomes aware that it failed to submit an application, or submitted incorrect information in an application or in any report to the director, it shall promptly submit such facts or information.

#### 13. RESERVED

#### 14. DUTY TO MITIGATE

The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.



**15. AUTHORIZED DISCHARGES**

All discharges authorized herein shall be consistent with the terms and conditions of this permit. The discharge of any pollutant identified in this permit more frequently than, or at a level in excess of, that authorized by this permit shall constitute a violation of the terms and conditions of this permit. Such violations may result in the imposition of civil and/or criminal penalties as provided for in Section 309 of the Act and Ohio Revised Code Sections 6111.09 and 6111.99.

**16. DISCHARGE CHANGES**

The following changes must be reported to the appropriate Ohio EPA district office as soon as practicable:

A. For all treatment works, any significant change in character of the discharge which the permittee knows or has reason to believe has occurred or will occur which would constitute cause for modification or revocation and reissuance. The permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements. Notification of permit changes or anticipated noncompliance does not stay any permit condition.

B. For publicly owned treatment works:

1. Any proposed plant modification, addition, and/or expansion that will change the capacity or efficiency of the plant;
2. The addition of any new significant industrial discharge; and
3. Changes in the quantity or quality of the wastes from existing tributary industrial discharges which will result in significant new or increased discharges of pollutants.

C. For non-publicly owned treatment works, any proposed facility expansions, production increases, or process modifications, which will result in new, different, or increased discharges of pollutants.

Following this notice, modifications to the permit may be made to reflect any necessary changes in permit conditions, including any necessary effluent limitations for any pollutants not identified and limited herein. A determination will also be made as to whether a National Environmental Policy Act (NEPA) review will be required. Sections 6111.44 and 6111.45, Ohio Revised Code, require that plans for treatment works or improvements to such works be approved by the Director of the Ohio EPA prior to initiation of construction.

D. In addition to the reporting requirements under 40 CFR 122.41(l) and per 40 CFR 122.42(a), all existing manufacturing, commercial, mining, and silvicultural dischargers must notify the Director as soon as they know or have reason to believe:

1. That any activity has occurred or will occur which would result in the discharge on a routine or frequent basis of any toxic pollutant which is not limited in the permit. If that discharge will exceed the highest of the "notification levels" specified in 40 CFR Sections 122.42(a)(1)(i) through 122.42(a)(1)(iv).
2. That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the "notification levels" specified in 122.42(a)(2)(i) through 122.42(a)(2)(iv).

**17. TOXIC POLLUTANTS**

The permittee shall comply with effluent standards or prohibitions established under Section 307 (a) of the Clean Water Act for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement. Following establishment of such standards or prohibitions, the Director shall modify this permit and so notify the permittee.

**18. PERMIT MODIFICATION OR REVOCATION**

A. After notice and opportunity for a hearing, this permit may be modified or revoked, by the Ohio EPA, in whole or in part during its term for cause including, but not limited to, the following:

1. Violation of any terms or conditions of this permit;
2. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts; or
3. Change in any condition that requires either a temporary or permanent reduction or elimination of the permitted discharge.

B. Pursuant to rule 3745-33-04, Ohio Administrative Code, the permittee may at any time apply to the Ohio EPA for modification of any part of this permit. The filing of a request by the permittee for a permit modification or revocation does not stay any permit condition. The application for modification should be received by the appropriate Ohio EPA district office at least ninety days before the date on which it is desired that the modification become effective. The application shall be made only on forms approved by the Ohio EPA.

**19. TRANSFER OF OWNERSHIP OR CONTROL**

This permit may be transferred or assigned and a new owner or successor can be authorized to discharge from this facility, provided the following requirements are met:

A. The permittee shall notify the succeeding owner or successor of the existence of this permit by a letter, a copy of which shall be forwarded to the appropriate Ohio EPA district office. The copy of that letter will serve as the permittee's notice to the Director of the proposed transfer. The copy of that letter shall be received by the appropriate Ohio EPA district office sixty (60) days prior to the proposed date of transfer;

B. A written agreement containing a specific date for transfer of permit responsibility and coverage between the current and new permittee (including acknowledgement that the existing permittee is liable for violations up to that date, and that the new permittee is liable for violations from that date on) shall be submitted to the appropriate Ohio EPA district office within sixty days after receipt by the district office of the copy of the letter from the permittee to the succeeding owner;

At anytime during the sixty (60) day period between notification of the proposed transfer and the effective date of the transfer, the Director may prevent the transfer if he concludes that such transfer will jeopardize compliance with the terms and conditions of the permit. If the Director does not prevent transfer, he will modify the permit to reflect the new owner.

**20. OIL AND HAZARDOUS SUBSTANCE LIABILITY**

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under Section 311 of the Clean Water Act.

**21. SOLIDS DISPOSAL**

Collected grit and screenings, and other solids other than sewage sludge, shall be disposed of in such a manner as to prevent entry of those wastes into waters of the state, and in accordance with all applicable laws and rules.

**22. CONSTRUCTION AFFECTING NAVIGABLE WATERS**

This permit does not authorize or approve the construction of any onshore or offshore physical structures or facilities or the undertaking of any work in any navigable waters.

**23. CIVIL AND CRIMINAL LIABILITY**

Except as exempted in the permit conditions on UNAUTHORIZED DISCHARGES or UPSETS, nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance.

**24. STATE LAWS AND REGULATIONS**

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable state law or regulation under authority preserved by Section 510 of the Clean Water Act.

**25. PROPERTY RIGHTS**

The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state, or local laws or regulations.

**26. UPSET**

The provisions of 40 CFR Section 122.41(n), relating to "Upset," are specifically incorporated herein by reference in their entirety. For definition of "upset," see Part III, Paragraph 1, DEFINITIONS.

**27. SEVERABILITY**

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

**28. SIGNATORY REQUIREMENTS**

All applications submitted to the Director shall be signed and certified in accordance with the requirements of 40 CFR 122.22.

All reports submitted to the Director shall be signed and certified in accordance with the requirements of 40 CFR Section 122.22.

29. OTHER INFORMATION

A. Where the permittee becomes aware that it failed to submit any relevant facts in a permit application or submitted incorrect information in a permit application or in any report to the Director, it shall promptly submit such facts or information.

B. ORC 6111.99 provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than \$25,000 per violation.

C. ORC 6111.99 states that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit including monitoring reports or reports of compliance or noncompliance shall, upon conviction, be punished by a fine of not more than \$25,000 per violation.

D. ORC 6111.99 provides that any person who violates Sections 6111.04, 6111.042, 6111.05, or division (A) of Section 6111.07 of the Revised Code shall be fined not more than \$25,000 or imprisoned not more than one year, or both.

30. NEED TO HALT OR REDUCE ACTIVITY

40 CFR 122.41(c) states that it shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with conditions of this permit.

31. APPLICABLE FEDERAL RULES

All references to 40 CFR in this permit mean the version of 40 CFR which is effective as of the effective date of this permit.

32. AVAILABILITY OF PUBLIC SEWERS

Notwithstanding the issuance or non-issuance of an NPDES permit to a semi-public disposal system, whenever the sewage system of a publicly owned treatment works becomes available and accessible, the permittee operating any semi-public disposal system shall abandon the semi-public disposal system and connect it into the publicly owned treatment works.

**PART VII – Production Area Monitoring and Inspections and Land Application Requirements**General

The permittee's approved manure management (MMP) plan shall be developed and implemented in accordance with the best management practices contained within this permit.

**PRODUCTION AREA REQUIREMENTS**Table 1. Monitoring/Inspection Requirements

Action	Frequency	Record Keeping Requirements
Grab samples shall be taken of all discharges from the production area. Clean storm water that has been diverted does not need to be sampled.	Each time they occur	Date and time of sample, results of analysis, and the information required in Part III, 5 and 6. See Part I, A, 1, e.
All discharges from the production area and land application area shall be recorded in the operating record.	Each time they occur	Cause, volume, and duration of discharge and any corrective actions needed and the dates those actions were taken. See Part I, A, 1, e and Part I, A, 2, d.
In accordance with Part VII, B, 5 of this permit, grab samples shall be taken of discharges from land application areas where manure was applied on frozen and/or snow covered ground.	Each time they occur	Date and time of sample, results of analysis, and the information required in Part III, 5 and 6. See Part VII, B, 5.
Representative samples of the manure to be land applied shall be taken from each source (e.g., each lagoon, storage tank, or permanent stockpile area must be sampled).	1/year	The information required in PART III, 5 and 6. See Part VII, A, 2. (See note below.)
Representative soil samples of the manure land application fields.	Every 3 years	The information required in Part III, 5 and 6. See Part VII, A, 3. (See note below.)
Monitor operating level of all manure storage or treatment facilities.	1/week	Date and time of observation, manure level in each structure. See Part II, E. (See note below.)
Inspect manure storage or treatment facilities, including devices channeling contaminated storm water to the manure storage or treatment facility for evidence of erosion, leakage, animal damage, overflow, or discharge.	1/week	Date and time of inspection, structural integrity, vegetation condition, and any corrective actions needed and the dates those actions were taken. (See note below.)
Inspect storm water diversion devices or runoff diversion structures.	1/week	Date and time of inspection, observations of flow quantity and color, structural integrity (e.g. signs of cracks, sparse or stressed vegetation, erosion, etc.), any corrective actions needed and the dates those actions were taken.
Inspect drinking and cooling water lines that are located above ground, readily visible or accessible for daily inspections.	Daily	Date and time of inspection, number of leaks, any corrective actions needed and the dates those actions were taken.
Monitor forecast at the CAFO location.	Every land application event	Date, weather conditions (including percentage chance of rain) 24 hours prior to application, at the time of application, and 24 hours after application. See Part VII, A, 5 and Part VII, B, 2, e.
Inspect land application fields.	In accordance with MMP	Date and signs of discharge or runoff into surface waters and/or conduits to surface waters of the State.
Inspect land application equipment.	In accordance with MMP	List of equipment, date of inspections, corrective actions, calibration dates. (See note below.)



Note: Much of this information is required in the operating record for the Review Compliance Certificate or Permit to Operate issued by the Director of ODA. The operating record form provided by ODA is an acceptable format for maintaining records for the purposes of complying with this permit as well. However, make sure that additional records required by this permit are added to those record keeping forms.

1. Any deficiencies found as a result of these inspections must be corrected as soon as possible. Deficiencies not corrected within 30 days must be accompanied by an explanation of the factors preventing immediate correction.
2. Records of mortalities management and practices used by the CAFO shall be maintained to ensure compliance with Part I, A, 1, f.
3. Records documenting the current design of any manure storage structures, including volume for solids accumulation, design treatment volume, total design volume, and approximate number of days of storage capacity must be maintained at the CAFO.

## **LAND APPLICATION REQUIREMENTS**

### **A. CONTENTS OF THE MMP**

1. Nutrient Budget: The manure management plan shall include a total nutrient budget for the operation, based on 1) targeted crop yields based on actual crop yields, 2) soil productivity information, 3) historical yield data, 4) realistic potential yield, or 5) combinations of yield data. The plan shall consider all potential sources of nutrients including quantity of manure and manure nutrients, organic by-products, wastewater, commercial fertilizer, crop residues, legume credits, and irrigation water and a summary of the total acres of land to be used for land application.
2. Manure Characterization: At a minimum, manure from each manure storage or treatment facility shall be analyzed annually for the following: total nitrogen, ammonium nitrogen, organic nitrogen, phosphorus, potassium, and percent total solids. Procedures for the collection and analysis of the samples shall be in accordance with Publication A3769, "Recommended Methods of Manure Analysis; Published by the Board of Regents of the University of Wisconsin System, University of Wisconsin-Extension".
3. Soil Characterization: At a minimum, soil samples shall be taken to a uniform depth and the fertility analysis shall include: pH, phosphorus, potassium, calcium, magnesium and cation exchange capacity.
  - a. Soil fertility analysis shall be conducted in accordance with Publication 221, "Recommended Chemical Soil Test Procedures for the North Central Region; Published by the North Central Regional Committee on Soil Testing and Plant Analysis (NCR-13), North Dakota Agricultural Experiment Station". See Part VII, A, 3, e, below.
  - b. Sample shall be representative of a land application site with one composite soil sample representing no more than twenty-five acres or one composite soil sample for each land application site, whichever is less. A sample depth of 8 inches shall be used unless justified otherwise in the plan.
  - c. The manure management plan shall specify the soil sampling frequency in accordance with the following requirements:
    - (1) A site that receives manure shall be soil tested, at a minimum, once every three years.

- (2) For any land application site used by the owner or operator the land application site shall be sampled at least six months following application.
  - d. Results of the soil sampling events shall be recorded and shall include the location of the soil sample collection site, the depth of the sample collected and the analysis.
  - e. In developing appropriate manure application rates for land application methods, the owner or operator shall use the Bray P1 soil test level or equivalent appropriate phosphorus soil test, (Mehlich III, Olsen, Phosphorus Retention Test). The owner or operator shall choose a phosphorus soil test method and identify the selected method in the manure management plan.
4. Land Application Methods – Methodology for Determining Manure Application Rates
- a. Determine if the land application site has soils that are prone to flooding and when the expected flooding seasons are according to Table 3. For timing restrictions, see Part VII, B, 2, c.
  - b. The manure application rate shall be based on the land application site's soil tests that are no older than three years. See Part VII, A, 3, above.
  - c. The manure application rate shall be based on the most current manure test results. The manure test results expressed as a nutrient percentage shall be converted into either pounds per ton of dry manure or pounds per one thousand gallons of liquid manure.
  - d. Determine if a solid or liquid manure application will be performed. The manure application rate shall be based on the most limiting factor (i.e., most restrictive factor for the purpose of protecting surface water quality) of the following:
    - (1) For liquid manure (less than 20% solids):
      - i. The crop nitrogen requirements or removal expressed in thousands of gallons of manure per acre, as determined in accordance with g., below;
      - ii. The crop phosphorus requirements or removal expressed in thousands of gallons of manure per acre, as determined in accordance with h., below;
      - iii. The restrictions on the volume of liquid manure application, in accordance with Part VII, B and Part VII, C, Tables 21 and 22, with volume expressed as a measure of gallons per acre or inches per acre, with twenty seven thousand two hundred gallons equal to one acre/inch;
      - iv. The application rate shall not exceed the available water capacity in the upper eight inches of the soil for both subsurface and nonsubsurface drained sites in accordance with Part VII, C, Table 4; and
      - v. The application rate shall be adjusted to preclude surface ponding and/or runoff from a land application site. See Part VII, B, 2.
    - (2) For solid manure (greater than or equal to 20% solids):
      - i. Either the crop nitrogen requirements or removal of nitrogen expressed in pounds per ton of dry manure per acre, as determined in accordance with g., below;

- ii. The crop phosphorus requirements or removal expressed in pounds per ton of dry manure per acre, as determined in accordance with h., below; or
  - iii. The restrictions on the volume of solid manure applied, taken from Part VII, B and Part VII, C, Tables 21 and 22, with volume expressed as a measure of tons/acre.
- e. Determine if solid manure will be stockpiled at the land application site. Stockpiles shall meet the setbacks in Part VII, B, Table 2.
- f. For liquid manure applications, determine restrictions based on Part VII, C, Table 4 Available Water Capacity and Tables 21 and 22 Most Limiting Manure Application Rates (for Tiled Fields and Non-Tiled Fields). For solid manures, determine restrictions based on Part VII, C, Tables 21 and 22 Most Limiting Manure Application Rates Charts (for Tiled Fields and Non-Tiled Fields).
- g. The manure application rate for nitrogen shall be the most restrictive value (i.e., most restrictive factor for the purpose of protecting surface water quality) determined after considering the following:
  - (1) The application rate for nitrogen shall be based on utilization of crops at the recommended agronomic rates (using the Ohio Agronomy Guide, OSU Bulletin 472) and based on minimum runoff and leaching to waters of the state, as determined in accordance with (3) below.
  - (2) In determining the agronomic rate for nitrogen, the owner or operator shall do the following:
    - i. Determine the nitrogen requirements (based on Part VII, C, Tables 6, 7, and 8) or removal rates (based on Part VII, C, Table 5) for a realistic yield goal of planned crops; Determine the nutrient removal for the expected cropping sequence using Part VII, C, Table 5 Nutrient removed in Harvested Portions of Crops. Determine residual nitrogen credits for the expected cropping sequence using Part VII, C, Table 8 Residual Nitrogen Credits Based on Previous Crops.
    - ii. Subtract the nitrogen credit to be given to the next crop in accordance with values for previous crops, subtract credits for crop residues and legumes grown in previous years, and subtract nitrogen that will be added in other forms including commercial fertilizer and organic by-products (see Part VII, C, Table 8); and
    - iii. When applying nitrogen to a grass or legume cover crop that is growing or being established immediately after manure application, manure can be applied at the recommended nitrogen rate (using the Ohio Agronomy Guide, OSU Bulletin 472) for the next non-legume crop or the nitrogen removal rate for the next legume crop.
  - (3) In determining how to minimize nitrogen leaching to waters of the state, the owner or operator shall do the following:
    - i. Assess each land application site with the Ohio nitrogen leaching risk assessment procedure in Part VII, C; and
    - ii. If the nitrogen leaching risk assessment procedure completed in accordance with i above, demonstrates that the land application site has a high nitrogen leaching potential and no growing cover crop, then application of manure shall be limited to fifty

pounds per acre as applied nitrogen calculated at the time of application (by adding ammonia-nitrogen to one third of organic nitrogen) from June to October first.

- (4) Use the current manure analysis and the relevant sections of the following tables in Part VII, C to determine the amount of manure nutrient available for crop production: Table 10 Calculating Available Nitrogen of Manure, Table 11 Nitrogen Sufficiency ranges for Corn, Soybeans, Alfalfa and Wheat, and Table 12 Sidedress N Fertilizer Rates for Corn.
  - (5) When using legumes as a nitrogen removal source, the maximum legume nitrogen removal must be less than or equal to one hundred and fifty pounds per acre.
- h. The manure application rate for phosphorus shall be the most restrictive value (i.e., most restrictive factor for the purpose of protecting surface water quality) determined after considering the following:
- (1) The application rate for phosphate applications shall be based on the following:
    - i. Estimated plant uptake by crops at the recommended agronomic rates (using the Ohio Agronomy Guide, OSU Bulletin 472);
    - ii. Soil test analysis;
    - iii. Subsequent phosphorus removal in plant biomass (see Part VII, C, Table 5); and
    - iv. Minimum runoff to waters of the State.
  - (2) In determining the agronomic rate for phosphate application, the owner or operator shall do the following:
    - i. Determine the phosphorus requirements for a realistic yield goal of planned crops and/or crop rotations (see Part VII, C, Tables 13, 14, 15, 16, and 17);
    - ii. Subtract phosphorus that will be added in other forms including commercial fertilizer and organic by-products; and
    - iii. The application rate for phosphorus shall not exceed the removal rates for a realistic yield goal of planned crops, unless following the procedures in h, (3) below.
  - (3) In determining how to minimize phosphorus runoff to waters of the State, the owner or operator shall do the following:
    - i. Prior to the land application of manure, a land application site shall be assessed with either the phosphorus index risk assessment procedure or the phosphorus soil test risk assessment procedure in Part VII, C. This risk assessment shall be used in the determination of manure application rates and the results shall be documented as required in Part VII, A, 5. Use the phosphorus index risk assessment procedure if the Bray P1 value of the soil test is over one hundred and fifty parts per million. The phosphorus index risk assessment procedure shall only be relied upon for a transitional period of time to allow the owner or operator an opportunity to find other fields or other methods to distribute nutrients from the facility in order to achieve less than one hundred and fifty parts per million Bray P1 soil test method;

- ii. There shall be no multi-year phosphorus applications on fields where either the phosphorus index risk assessment procedure produces a high rating or the phosphorus soil test risk assessment procedure produces a high potential rating. There shall be no phosphorus applications on fields where either the phosphorus index risk assessment procedure produces a very high rating or the phosphorus soil test risk assessment procedure produces a very high potential rating; and
  - iii. Phosphate manure application rates above two hundred and fifty pounds per acre are not recommended. However, if phosphate concentrations in liquid manure exceed sixty pounds of phosphate per one thousand gallons or eighty pounds phosphate per ton for solid manure, rates higher than two hundred and fifty pounds per acre may need to be applied due to limitations of the application equipment. In no case shall manure application exceed the rates specified in Part VII, A, 4, g and Part VII, A, 4, h, (3), ii. In no case shall phosphate applications exceed five hundred pounds per acre of phosphate during one year. When phosphate applications exceed two hundred and fifty pounds per acre the following additional criteria applies:
    - Phosphate applications exceeding two hundred and fifty pounds per acre in any one year shall not be applied on fields with a phosphorus soil test exceeding 100 ppm Bray P1 or equivalent, results of a phosphorus index risk assessment procedure notwithstanding.
    - The manure shall be immediately injected or incorporated 3 to 5 inches deep.
    - The manure shall not be applied on either frozen or snow covered ground.
    - There shall be no further phosphate applications for a minimum of three years on land with a phosphorus soil test level below 40 ppm (80 pounds per acre) Bray P1 or equivalent and no additional phosphate applications for a minimum of five years on land with a phosphorus soil test level above 40 ppm (80 pounds per acre) Bray P1 or equivalent.
  - i. A comparison shall be made of all the manure land application requirements. The selected rate shall be documented in accordance with the record keeping requirements in Part VII, A, 5.
5. Record Keeping Requirements: At a minimum, the following records must be kept by the permittee:
  - a. Expected crop yields.
  - b. The date(s) manure is applied to each field.
  - c. Weather conditions at the time of application and for 24 hours prior to and following application. See Part VII, B, 2, e.
  - d. Test methods used to sample and analyze manure and soil.
  - e. Results from manure and soil sampling.
  - f. Explanation of the basis for determining manure application rates, as provided by Part VII, A, 4.
  - g. Calculations showing the total nitrogen and phosphorus to be applied to each field, including sources other than manure.



- h. Total amount of nitrogen and phosphorus actually applied to each field, including documentation of calculations for the total amount applied.
- i. The method used to apply the manure.
- j. Date(s) of manure application equipment inspection.

**B. LAND APPLICATION RESTRICTIONS (Effective beginning on the date that coverage under this permit is granted.)**

1. Land application of manure shall be conducted in accordance with the following:

Table 2. Manure Application Rate Restrictions

<b>Manure Application Distance Restrictions and, Where Appropriate, Rate Restrictions For the Following Items</b>
<b>Streams, Lakes, Ponds, Watercourses, Other Surface Water, Waterways, Open Tile Line Intake Structures, or Other Conduits to Surface Waters</b>
Manure shall not be applied closer than 100 feet, unless a 35-foot vegetated buffer has been established where manure application is prohibited. A mandatory 35-foot vegetated buffer must be established along fields with perennial streams regardless of setback requirement.
<b>Public Drinking Water Surface Water Intakes</b>
Land Application shall not take place within the emergency management zone of a public water system using surface water. Otherwise, manure shall not be applied closer than 300 feet from the edge of the field.
<b>Seasonal Salmonid and Cold Water Habitats</b>
Manure shall not be applied closer than 100 feet, unless a 35-foot vegetated buffer has been established where manure application is prohibited.
<b>Public Drinking Water Wells</b>
Land application shall not take place within a highly susceptible drinking water source protection area (as defined by Ohio EPA) for a community public water system using ground water and not within the inner management zone for all other community public water systems using ground water.
Land application shall not take place within the inner management zone of a drinking water source protection area or within 300 feet of a water supply well serving a transient non-community or non-community, non-transient public water system using ground water, whichever distance is greater.
<b>Private Drinking Water Wells</b>
For injection application and surface application followed by incorporation within 24 hours, manure shall not be applied closer than 100 feet.
For surface application not followed by incorporation within 24 hours, manure shall not be applied closer than 300 feet.
<b>Class V Agricultural Drainage Wells, Agricultural Wellheads, Abandoned or Uncapped Oil Wells, or Sinkholes</b>
For injection application and surface application followed by incorporation within 24 hours, manure shall not be applied closer than 100 feet.
For surface application not followed by incorporation within 24 hours, manure shall not be applied closer than 300 feet.
<b>Springs</b>
Manure shall not be applied closer than 300 feet.
<b>Slope</b>
For fields with a slope less than 15%, surface application can be used when yearly average soil loss is less than five tons per acre or "T", whichever is less.

Manure shall not be applied to cropland over 15% slope or to pasture/hay land over 20% slope unless one of the following precautions are taken:

- a. Immediate incorporation or injection with operations done on the contour, unless the field has 80% ground cover (residue or canopy);
- b. Applications are timed during periods of lower runoff and/or rainfall (May 20 to October 15);
- c. Split applications are made (separated by rainfall events) with single applications not exceeding 5000 gallons per acre for liquid manure or 10 wet tons per acre for solid manure;
- d. The field is established and managed in contour strips with alternated strips in grass or legume.

#### Stockpiling of Manure

Streams, Lakes, Ponds, Watercourses, Waterways, Open Tile Line Intake Structures, or Other Conduits to Surface Waters, minimum 300 feet. (Stockpiling within waterways or concentrated flow areas is prohibited.)

Public and Private Wells/Springs, minimum 300 feet.

Flooding/flood plains/floodways, prohibited.

Public drinking water surface intakes, minimum 1500 feet.

Class V agricultural drainage wells and sinkholes, minimum 300 feet.

Slope, 0-6% only.

## 2. Timing/Site Restrictions:

- a. Prior to land applying manure, the permittee shall inspect the land application area to determine the suitability of the site for land application (considerations shall include tile location and depth, soil type, evidence of soil cracking, available water capacity of the soil, crop maturity, prior precipitation, forecasted precipitation, etc.) and document field conditions at the time of the inspection. See Part VII, A, 5. Broken tiles or blow out holes shall be repaired prior to land application.
- b. For fields with soil cracks greater than six inches deep, the soil must be tilled before the land application of liquid manure or the application must be delayed until the cracks are sealed. However, liquid manure applications may be made on tiled fields with growing crops if the application rate is less than or equal to a quarter of an inch or six thousand seven hundred gallons per acre and tile plugs are used or tile stops closed prior to application. See Part VII, B, 3 below.
- c. For fields that are prone to flooding, floodplains, or floodways, manure must be injected or incorporated within 24 hours of application. No manure application shall occur during periods of expected flooding. See USDA, NRCS Field Office Technical Guide.
- d. Land application of manure shall not cause ponding or runoff. For liquid manure applications, the land application shall not exceed the available water capacity in the upper eight inches of the soil in the application field.
- e. Land application shall not occur on saturated soils or during rain or runoff events, and shall not occur if the forecast contains a greater than fifty per cent chance of precipitation as determined in "Managing Manure Nutrients at Concentrated Animal Feeding Operations, Appendix M, United States Environmental Protection Agency, EPA-821-B-04-006, August 2004," exceeding an amount of one-quarter inch for hydrologic soil group D soils and one-half inch for hydrologic soil group A, B, and C soils, for a period extending twenty-four hours after the start of land application. Record weather conditions in the operating record for conditions at the time of

application and for twenty-four hours prior to and following application. For determining hydrologic soil groups, refer to USDA-NRCS Engineering Field Manual, Chapter 2 – Ohio Supplement (1989), Table 2.1, pages 2-42 through 2-83.

- f. If solid manure is applied on conventionally tilled bare soil, the manure shall be incorporated into the soil within two days after application on the land. This requirement does not apply to no-till fields, pasture, or fields where crops are actively growing.
  - g. Manure application shall not take place on fields where soil loss exceeds "T" (Tolerable Soil Loss, See USDA, NRCS Field Office Technical Guide).
- 3. For land application sites with subsurface tile drainage, the permittee shall visually monitor all field tile outlets before, during and after application of manure to the site and record the results of that monitoring. The permittee shall have access to or methods/devices to stop or capture subsurface drain flow. If manure reaches the subsurface drain outlet to waters of the State, the application of manure shall cease and the flow stopped or captured. If land application has caused manure laden water to be discharged from a field tile, Ohio EPA shall be notified by calling 1-800-282-9378 as soon as possible, but in no case later than 24 hours following first knowledge of the occurrence. See Part I, A, 2, d.
- 4. For the land application of liquid manure to sites with subsurface tile drainage, the following criteria must be followed:
  - a. Application rates shall be less than or equal to half an inch or thirteen thousand gallons per acre per application event;
  - b. A tool shall be used that can disrupt and/or close the preferential flow paths in the soil using horizontal fracturing, or the surface of the soil shall be tilled three to five inches deep to a seedbed condition to soak up the liquid manure and keep it out of preferential flow channels;
  - c. If injection is used, manure shall only be injected deep enough to cover manure with soil. The soil shall be tilled at least three inches below the depth of injection prior to application; and
  - d. For fields with growing crops or continuous no till fields where tillage is not an option, all tile outlets from the application area are to be plugged/tile stops closed prior to application.
- 5. Manure shall be managed in such a manner to prevent land application on frozen or snow covered ground. Every attempt shall be made by the permittee to avoid land application during the frozen or snow covered ground conditions because of lack of agronomic benefit and high risk of pollution of surface waters. As stated in Part II, failure to take appropriate action to avoid land application on frozen and/or snow covered ground is a violation of this permit and subject to enforcement. The nutrients in the manure applied on frozen and/or snow covered ground shall be included in the manure application rate calculations for the next crop.

If practical, manure should be injected and/or incorporated within 24 hours to minimize surface manure runoff. Where manure is not injected or incorporated within 24 hours, the following frozen and/or snow covered ground restrictions are mandatory.

Other locations for manure disposal shall be investigated prior to the land application (i.e., transfer of manure to another waste treatment or storage facility, wastewater treatment plant, rental or acquisition of a storage tank, etc.).

Stockpiling of solid manure, in accordance with this permit, shall be utilized rather than spreading on the field.

Only limited quantities of manure shall be applied to address manure storage limitations until non-frozen or non-snow covered soils are available for manure application.

Records must be maintained for all instances of application on frozen or snow covered ground that include: date, amount applied, location, acres applied to, weather and soil conditions including depth of snow cover, surface residue cover, and reason for applying manure at that time.

In addition to all of the above land application restrictions (restrictions on fields prone to flooding, not causing ponding or runoff, restrictions on saturated soils, and requirements for tilled fields), the following criteria must also be met for surface manure application on frozen or snow covered ground per application event per field per winter season:

- a. The field must have greater than or equal to ninety percent surface residue cover at the time of application, and vegetation/residue shall not be completely covered by ice and/or snow at the time of application;
- b. The maximum manure application rate is five thousand gallons per acre for liquid manure, ten wet tons per acre for solid manure with more than fifty percent moisture, and five wet tons per acre for solid manure with less than fifty percent moisture. Depending on soil hydrologic group and surface residue cover, the liquid manure application rate on frozen soils may need to be lowered to prevent manure ponding or runoff;
- c. Manure shall not be applied on more than twenty contiguous acres. Contiguous areas for application are to be separated by a break of at least two hundred feet. Areas used for application are to be the furthest from surface waters and present the least potential for runoff;
- d. Setbacks from surface waters and conduits to surface waters (including grassed waterways and surface drains) must be a minimum of two hundred feet. This setback shall also have at least 90 percent surface residue cover, and vegetation/residue shall not be completely covered by ice and/or snow at the time of application. This distance may need to be further increased due to local conditions and other setback restrictions in Part VII, B, 1;
- e. For fields with slopes greater than six percent, manure shall be applied in alternating strips sixty to two hundred feet wide generally on the contour, or in the case that the field is managed in contour strips with alternative strips in grass or legume, manure shall only be applied on alternative strips. Note that the application rate shall be determined for each separate application strip area, not area of entire field;
- f. Manure phosphate applications exceeding two hundred and fifty pounds per acre are prohibited.

If the permittee surface applies manure on frozen or snow covered ground, concentrated field surface drainage and tile outlets shall be visually monitored at the conclusion of the manure application, and periodically afterwards when weather is likely to produce manure runoff including when temperatures rise, snow melts, and in conjunction with rainfall, etc., until the manure has been assimilated into the field and is no longer likely to discharge into waters of the State. If the land applied manure discharges to waters of the State, then the permittee shall notify Ohio EPA within two hours of detection of the runoff event. In accordance with Part I, A of this permit, a discharge of manure to waters of the State from land application on frozen and/or snow covered ground that is not the result of a precipitation event is prohibited and a violation of the permit.

If the ammonia nitrogen level in a water quality sample is determined to be 26 mg/L or greater in the discharge at the point it enters waters of the State, then any additional surface application of manure to frozen and/or snow covered ground is prohibited on the field where the runoff event occurred. In the event that the permittee follows the permit requirements and runoff from frozen or snow covered fields discharges to waters of the State with an ammonia nitrogen content of 26 mg/L or greater in a total of three surface land application events, then surface application of manure on any frozen and/or snow covered ground is prohibited for that permittee from that point on.

In the event that a permittee fails to comply with the land application requirements for frozen or snow covered ground (including notification of discharges, monitoring and record keeping requirements) more than two times, then land application on any frozen or snow covered ground will be prohibited for that permittee upon receipt of the third notice of violation by Ohio EPA.

In addition to the visual monitoring and reporting requirements stated above, the permittee shall collect representative grab samples from discharges of land applied manure into waters of the State at the point that the discharge enters waters of the State (i.e., concentrated field surface runoff or field tile outlet discharge prior to entrance to surface water) and have the sample analyzed for, at a minimum, the following parameter:

00610 – Nitrogen, Ammonia (NH<sub>3</sub>) – mg/L

The permittee shall: (a) collect the sample within 30 minutes of the first knowledge of the discharge; or (b) if the sampling in that period is inappropriate due to dangerous weather conditions, collect the sample as soon as possible after suitable conditions occur, and document the reason for delay.

The permittee shall report the results of the discharge sample(s) to Ohio EPA, Central Office, Division of Surface Water, within 14 days of occurrence. The report shall, at a minimum, contain the sample results, describe the reason for the discharge, the location, estimate of quantity and duration of the discharge, and duration of the precipitation leading up to the event, as well as any measures taken to clean up and eliminate the discharge and required land application records stated above. Laboratory results not available at the time of the report submittal shall be submitted to Ohio EPA within five days of receipt.

6. The permittee is responsible for complying with this permit for land application activities conducted on each site where the permittee, or anyone employed by the permittee, owns, operates, or land applies manure generated from the CAFO or determines timing and amount of manure to be applied on fields not otherwise owned, rented, or leased by the CAFO.

#### C. Tables and Procedures for Manure Application Rate Determination

Note: Much of the information contained in this section is consistent with ODA rule in OAC 901:10-2-14 and associated appendices.

Table 3. Soils Prone to Flooding

Soils Prone to Flooding	Months	Comment	Soils Prone to Flooding	Months	Comment
Abscota Variant	Feb-Jun		Medway Variant	Nov-May	
Adrian	Nov-May		Medway, limestone substratum	Nov-Dec	
Aetna	Dec-Jun		Melvin	Sep-May	Frequently flooded, long



Soils Prone to Flooding	Months	Comment	Soils Prone to Flooding	Months	Comment
					duration
Algansee	Nov-May		Melvin	Dec-May	
Algiers	Dec-Jun	Frequently flooded	Mentor	Jan-Dec	
Alluvial land	Nov-Dec	Occasionally flooded	Millgrove	Nov-Jun	
Alluvial land	Jan-Dec	Long duration	Montgomery	Nov-May	
Ashton	Dec-May	Very long duration	Moshannon	Dec-May	
Beaucoup	Mar-Jun		Muskego	Nov-May	
Bonnie	Oct-Jun		Newark	Dec-Apr	
Brookston	Dec-May		Newark Variant	Jan-Apr	
Carlisle	Nov-May		Nolin	Feb-May	
Ceresco	Mar-May		Nolin Variant	Feb-Apr	
Chagrin	Nov-May		Olentangy	Nov-Dec	
Chavies	Nov-Mar		Orrville	Nov-May	
Clifty	Nov-May		Otego	Nov-Dec	
Coblen	Nov-Jun		Papakating	Nov-Jun	
Cohoctah	Nov-Apr		Patton	Jan-Dec	
Cuba	Jan-May		Peoga	Jan-Dec	
Defiance	Jan-May		Pewamo	Mar-Apr	
Edwards	Sep-May		Philo	Dec-May	
Eel	Oct-Jun		Piopolis	Mar-Jun	
Eel Variant	Jan-May		Pope	Nov-Apr	
Elkinsville	Jan-Dec		Rockmill	Sep-Jun	
Euclid	Dec-Jun		Romeo	Mar-Jun	
Fitchville	Dec-Jun		Ross	Nov-Jun	
Flatrock	Dec-Apr		Rosburg	Nov-Jun	
Flatrock, limestone substratum	Nov-Apr		Sarahsville	Dec-May	
Fluvaquents	Nov-Jun		Saranac	Nov-May	
Genesee	Oct-May		Scioto	Nov-Jun	
Genesee Variant	Jan-May		Sebring	Nov-Jun	Occasionally flooded
Gessie	Oct-May		Senecaville	Dec-Apr	
Glendora	Jan-Dec		Shoals	Oct-Jun	
Grigsby	Dec-Apr		Shoals Variant	Nov-May	Used in Miami, Putnam, and Richland Counties
Hackers	Jan-Apr		Shoals Variant	Oct-Jun	Used in Champaign County
Harrod	Nov-Jun		Shoals, Till Substratum	Nov-Dec	
Hartshorn	Nov-May		Skidmore	Dec-May	
Haymond	Dec-May		Sligo	Mar-Apr	
Holly	Sep-May	Frequently flooded, very long duration	Sloan	Nov-Jun	
Holly	Nov-May		Sloan, Till Substratum	Nov-Dec	
Holton	Dec-Jun		Stanhope	Nov-Dec	
Huntington	Dec-May		Stendal	Jan-May	
Joliet	Apr-Jun		Stone	Nov-Jun	
Jules	Mar-Jun		Stonelick	Nov-Jun	
Kerston	Mar-May		Stringley	Nov-Jun	
Killbuck	Jan-Dec		Taggart	Jan-Dec	
Kinn	Dec-Apr		Tioga	Nov-May	
Knoxdale	Dec-Apr		Tioga Variant	Jan-Apr	
Kyger	Nov-May		Toledo	Nov-May	
Landes	Jan-Jun		Tremont	Jan-Dec	
Landes Variant	Nov-Jun		Wabash	Nov-May	
Lanier	Nov-Jun		Wabasha	Sep-Jun	
Latty	Jan-May		Wakeland	Jan-May	

Soils Prone to Flooding	Months	Comment	Soils Prone to Flooding	Months	Comment
Lenawee	Mar-May		Wallkill	Sep-Jun	
Lindside	Dec-Apr		Wappinger	Jan-Dec	
Linwood	Nov-Jun		Warsaw Variant	Jan-May	
Lobdell	Jan-Apr	Frequently flooded	Wayland	Nov-Jun	
Lobdell	Nov-Apr		Wick	Oct-Jun	
Martinsville	Jan-Apr		Wilbur	Oct-Jun	
Martisco	Mar-Jun		Willette	Nov-Dec	
McGary Variant	Jan-Dec		Seperick	Nov-Jun	
Medway	Nov-Jun		Zipp	Dec-May	

### Available Water Capacity (AWC)

This table shall be used to determine the AWC at the time of application and the liquid volume in gallons that can be applied not to exceed the AWC. To determine the AWC in the upper 8 inches use a soil probe or similar device to evaluate the soils to a depth of 8 inches. For land application, liquid manure application may also be calculated by converting acres per inch to gallons per acre. This conversion is based on the following formula: 1 acre – inch equals 27,156 gallons per acre.

**Table 4. Available Water Capacity**

Available Moisture in the Soil	Sands, Loamy Sands	Sandy Loam, Fine Sandy Loam	Very Fine Sandy Loam, Loam, Silt Loam, Silty Clay Loam	Sandy Clay, Silty Clay, Clay, Fine & Very Fine Textured Soils
<25% Soils Moisture	Dry, loose and single-grained; flows through fingers.	Dry and loose; flows through fingers.	Powdery dry; in some places slightly crushed but breaks down easily into powder.	Hard, baked and cracked; has loose crumbs on surface in some places.
Amount to Reach AWC	20,000 gal/acre	27,000 gal/acre	40,000 gal/acre	27,000 gal/acre
25-50% or Less Soil Moisture	Appears to be dry; does not form a ball under pressure.	Appears to be dry; does not form a ball under pressure.	Somewhat crumbly but holds together under pressure.	Somewhat pliable; balls under pressure.
Amount to Reach AWC	15,000 gal/acre	20,000 gal/acre	30,000 gal/acre	20,000 gal/acre
50-75% Soil Moisture	Appears to be dry; does not form a ball under pressure.	Balls under pressure but seldom holds together.	Forms a ball under pressure; somewhat plastic; slicks slightly under pressure.	Forms a ball; ribbons out between thumb and forefinger.
Amount to Reach AWC	10,000 gal/acre	13,000 gal/acre	20,000 gal/acre	13,000 gal/acre
75% to Field Capacity	Sticks together slightly; may form a weak ball under pressure.	Forms a weak ball that breaks easily, does not stick.	Forms ball; very pliable; slicks readily if relatively high in clay.	Ribbons out between fingers easily; has a slick feeling.
Amount to Reach AWC	5,000 gal/acre	7,000 gal/acre	11,000 gal/acre	7,000 gal/acre
100% Field Capacity	On squeezing, no free water appears on soil, but wet outline of ball on hand.	On squeezing, no free water appears on soil, but wet outline of ball on hand.	On squeezing, no free water appears on soil, but wet outline of ball on hand.	On squeezing, no free water appears on soil, but wet outline of ball on hand.
Above Field Capacity	Free water appears when soil is bounced in hand.	Free water is released with kneading.	Free water can be squeezed out.	Puddles; free water forms on surface.

NOTE: Liquid manure applications to tiled fields must be less than or equal to 13,576 gal/acre.

Table 5. Nutrients Removed in Harvested Portions of Crops

Crop (Yield)	Nutrients Removed For Given Yields <sup>a</sup>			Nutrients Removed for Unit Yields <sup>b</sup>	
	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
	Pound/Acre			Pound/Bushel or Ton	
Alfalfa (6 T)	340 <sup>c</sup>	80	360	13.3 lb/T	60 lb/T
Corn (150 Bu)					
Grain	135	55	40	0.37 lb/bu	0.27 lb/bu
Stover	100	25	160		
Corn-Silage (26 T)	235	80	235	3.1 lb/T	9.0 lb/T
Grass – Cool season (3.5 T), Tall grasses and/or Forage legumes (established)	140	45	175	13.0 lb/T	60.0 lb/T
Oats (100 Bu)					
Grain	65	25	20	0.25 lb/bu	0.20 lb/bu
Straw	35	15	100	0.15 lb/bu	1.0 lb/bu
Sorghum-grain (7,600 lb)					
Grain	105	30	30	0.39 lb/100 lb	0.39 lb/100 lb
Stover	80	50	230		
Soybean (50 Bu)	190 <sup>c</sup>	40	70	0.80 lb/bu	1.4 lb/bu
Sugar Beets – roots (25 T)	100	50	250	2.0 lb/T	10.0 lb/T
Tobacco – Burley and Cigar filler					
Leaf (3000 lb)	105	25	185		
Stems and Suckers (2000 lb)	55	15	65		
Leaves and Stalks				1.3 lb/100 lb	8.3 lb/100 lb
Wheat (55 Bu)					
Grain	70	35	20	0.64 lb/bu	0.36 lb/bu
Straw	30	5	50	0.90 lb/bu	0.91 lb/bu

<sup>a</sup>Source: National Plant Food Institute and others.<sup>b</sup>Source: Ohio Agronomy Guide, 12<sup>th</sup> Edition.<sup>c</sup>Inculated legumes fix nitrogen from the air.Table 6. Nitrogen Rates<sup>a</sup> for Corn Based on Yield Potential

Corn Yield Potential (bu/acre)						
Previous Crop	80	100	120	140	160	180+
Corn, small grains	80	110	140	160	190	220

<sup>a</sup>N fertilizer rates are based on the following relationship:

$$N \text{ (lb/acre)} = -27 + (1.36 * \text{yield potential}) - N \text{ credit or } 110 + [1.36 * (\text{yield potential} - 100)] - N \text{ credit}$$

Table 7. Nitrogen Rates for Wheat Based on Yield Potential

Yield Potential (bu/acre)	Nitrogen Rate (Pounds N to Apply/acre)
50	40
70	75
90+	110

1. N rate is based on the following relationship:

$$N \text{ (lb/acre)} = 40 + [1.75 * (\text{yield potential} - 50)]$$

2. No nitrogen credits are made based on previous crop.

**Table 8. Residual Nitrogen Credits Based on Previous Crop**

Previous Crop	Nitrogen Credits
	Pounds of N
Corn, small grains	0
Soybeans	30
Grass sod	40
Established forage legume	
Average stand (3 plants/ft <sup>2</sup> )	<sup>b</sup>
Good stand (5 plants/ft <sup>2</sup> )	<sup>b</sup>
Annual legume cover crop	30

<sup>b</sup>N credits for established forage legume = 40 + 20 \* (plants/to maximum of 140/ft<sup>2</sup>)

### Ohio Nitrogen Leaching Assessment Procedure

Soils are classified as having a high, medium or low nitrogen leaching potential with relative index ratings from 0 - 10+ for their potential to leach nitrates below the root zone. The leaching potential is rated as high, medium or low by combining the soil's hydrologic soil grouping (A, B, C or D), the local county's annual rainfall, and the local county's season rainfall (October 1 to March 1).

To determine the soil's nitrogen leaching potential, use the following procedure:

1. Determine the soils hydrological soil grouping – A, B, C or D. For this information, refer to USDA-NRCS Engineering Field Manual, Chapter 2 – Ohio Supplement (1989), Table 2.1, pages 2-42 through 2-83.
2. Determine the local county's annual rainfall and the local county's season rainfall (October 1 to March 1). For this information, refer to USDA-NRCS Engineering Field Manual, Chapter 2 – Ohio Supplement (1989), Exhibit OH2-3, Supplement pages 1 through 4 and USDA-NRCS Engineering Field Manual, Chapter 2 – Ohio Supplement (1989), Exhibit OH2-1 and Sheets 1 through 3.
3. Refer to Table 9 below for the respective county to determine the soils relative leaching index rating.
  - (a) Soils with a rating of 0-2 have a low potential to leach nitrates below the root zone.
  - (b) Soils with a rating of 3-10 have a medium potential to leach nitrates below the root zone.
  - (c) Soils with a rating of 10+ have a high potential to leach nitrates below the root zone.
  - (d) All soils with systematic subsurface drains (tile) are rated high potential.

**Table 9. Ohio (By County) Leaching Index Ratings for Soils by Hydrologic Groups (A, B, C, D)**

County	A	B	C	D	County	A	B	C	D
Adams	15	10	6	4	Licking	15	8	6	4
Allen	10	6	4	2	Logan	15	8	4	4
Ashland	15	8	4	4	Lorain	15	8	4	2
Ashtabula	15	10	4	4	Lucas	10	6	4	2
Athens	15	10	6	4	Madison	15	8	6	4
Auglaize	10	8	4	2	Mahoning	15	8	4	4
Belmont	15	10	6	4	Marion	15	8	4	4
Brown	15	10	6	4	Median	15	8	4	4
Butler	15	10	6	4	Meigs	15	10	6	4
Carroll	15	8	4	4	Mercer	10	8	4	2
Champaign	15	8	4	4	Miami	15	8	4	4
Clark	15	8	6	4	Monroe	15	10	6	4
Clermont	15	10	6	4	Montgomery	15	10	6	4
Clinton	15	10	6	4	Morgan	15	8	6	4
Columbiana	15	8	4	4	Morrow	15	8	4	4

County	A	B	C	D	County	A	B	C	D
Coshocton	15	8	4	4	Muskingum	15	8	6	4
Crawford	15	8	4	2	Noble	15	8	6	4
Cuyahoga	15	8	4	4	Ottawa	10	6	4	2
Darke	15	8	4	4	Paulding	10	6	4	2
Defiance	10	6	4	2	Perry	15	8	6	4
Delaware	15	8	4	4	Pickaway	15	8	6	4
Erie	10	8	4	2	Pike	15	10	6	4
Fairfield	15	8	6	4	Portage	15	8	4	4
Fayette	15	10	6	4	Preble	15	10	6	4
Franklin	15	8	6	4	Putnam	10	6	4	2
Fulton	10	6	4	2	Richland	15	8	4	4
Gallia	15	10	6	4	Ross	15	10	6	4
Geauga	15	10	4	4	Sandusky	10	6	4	2
Greene	15	10	6	4	Scioto	15	10	6	4
Guernsey	15	8	6	4	Seneca	10	6	4	2
Hamilton	15	10	6	4	Shelby	15	8	4	4
Hancock	10	6	4	2	Stark	15	8	4	4
Hardin	10	8	4	2	Summit	15	8	4	4
Harrison	15	8	6	4	Trumbull	15	8	4	4
Henry	10	6	4	2	Tuscarawas	15	8	4	4
Highland	15	10	6	4	Union	15	8	4	4
Hocking	15	10	6	4	Van Wert	10	6	4	2
Holmes	15	8	4	4	Vinton	15	10	6	4
Huron	10	8	4	2	Warren	15	10	6	4
Jackson	15	10	6	4	Washington	15	10	6	4
Jefferson	15	8	6	4	Wayne	15	8	4	4
Knox	15	8	4	4	Williams	10	6	4	2
Lake	15	10	4	4	Wood	10	6	4	2
Lawrence	15	10	6	4	Wyandot	10	8	4	2

### Calculating Available Nitrogen of Manure<sup>1</sup>

Use the following table to calculate available nitrogen based on time of year and type of application. Determine available nitrogen by multiplying the percent available for ammonia N and organic N and adding them together (i.e.,  $0.5 * \text{NH}_4\text{N} + 0.33 * \text{Organic N}$ ).

Table 10. Available Nitrogen

Manure Applied	Manure Available Nitrogen	Poultry Manure Available Nitrogen	Available Nitrogen %		Time of Application	Days Until Incorporation <sup>2</sup>
Tons	Pounds	Pounds	NH <sub>4</sub>	Organic	Date	Days
			50	33	Nov-Feb	<5
			25	33	Nov-Feb	>3
			50	33	Mar-Apr	<3
			25	33	Mar-Apr	>3
			75	33	Apr-Jun	<1
			25	33	Apr-Jun	>1
			75	15	Jul-Aug	<1
			25	15	Jul-Aug	>1
			25	33	Sep-Oct	<1
			15	33	Sep-Oct	>1

<sup>1</sup> The calculations are for all animal manures. It is assumed that 50% of the organic N in poultry manure is converted to NH<sub>4</sub> rapidly and is therefore included in the NH<sub>4</sub> column for calculating available N.

<sup>2</sup> Incorporation is the mixing of manure and soil in the tillage layer. Disking is usually enough tillage for conserving N availability.



Table 11. Nutrient Sufficiency Ranges for Corn, Soybeans, Alfalfa and Wheat

Element	Corn	Soybeans	Alfalfa	Wheat
	Ear leaf sampled at initial silking	Upper fully developed leaf sampled prior to initial flowering	Top 6 inches sampled prior to initial flowering	Upper leaves sampled prior to initial bloom
Percent (%)				
Nitrogen	2.90-3.50	4.25-5.50	3.76-5.50	2.59-4.00
Phosphorus	0.30-0.50	0.30-0.50	0.26-0.70	0.21-0.50
Potassium,	1.91-2.50	2.01-2.50	2.01-3.50	1.51-3.00
Calcium	0.21-1.00	0.36-2.00	1.76-3.00	0.21-1.00
Magnesium	0.16-0.60	0.26-1.00	0.31-1.00	0.16-1.00
Sulfur	0.16-0.50	0.21-0.40	0.31-0.50	0.21-0.40
Parts Per Million (ppm)				
Manganese	20-150	21-100	31-100	16-200
Iron	21-250	51-350	31-250	11-300
Boron	4-25	21-55	31-80	6-40
Copper	6-20	10-30	11-30	6-50
Zinc	20-70	21-50	21-70	21-70
Molybdenum	-	1.0-5.0	1.0-5.0	-

Original Source: M.L. Vitosh (Michigan State University), J.W. Johnson (The Ohio State University), and D.B. Mengel (Purdue University) (1995). Tri-State Fertilizer Recommendations for Corn, Soybeans, Wheat and Alfalfa. Bulletin E-2567. East Lansing Michigan; Michigan State University.

### Sidedress Nitrogen Fertilizer Rates for Corn, Based on a Presidedress Nitrate Soil Test at the 4 to 6 Leaf Stage

Instructions: To effectively use the presidedress nitrate soil test, soil samples should be collected when the corn is in the 4 to 6 leaf stage, or 6 to 12 inches tall. Where manure or fertilizer has been broadcast, sampling procedures consist of taking a composite soil sample of 20-25 soil cores at random throughout the sampling area. The cores should be collected to a depth of 12 inches.

Table 12. Sidedress Nitrogen Fertilizer Rates for Corn

Soil Nitrate Level	Corn Yield Potential (bu/acre)					
	80	100	120	140	160	180
ppm NO <sub>3</sub> -N	Pounds Additional Fertilizer N To Apply Per Acre					
0-10	80	110	140	160	190	220
11-15	50	80	110	140	160	190
16-20	30	60	90	120	140	170
21-25	0	10	40	60	90	120
>25	0	0	0	0	0	0

Table 13. Phosphate (P<sub>2</sub>O<sub>5</sub>) Rate for Corn

Soil Test	Yield Potential (bu/acre)				
	100	120	140	160	180
ppm (lb/acre)	Pounds P <sub>2</sub> O <sub>5</sub> /acre				
5 (10)	85	95	100	110	115
10 (20)	60	70	75	85	90
15-30 (30-60)	35	45	50	60	65
35 (70)	20	20	25	30	35
40 (80)	0	0	0	0	0

Table 14. Phosphate (P<sub>2</sub>O<sub>5</sub>) Rate for Corn Silage

Soil Test	Yield Potential (tons/acre)				
	20	22	24	26	28
ppm (lb/acre)	Pounds P <sub>2</sub> O <sub>5</sub> /acre				
5 (10)	115	125	130	135	140
10 (20)	90	100	105	110	115
15-30 (30-60)	65	75	80	85	90
35 (70)	35	40	40	45	45
40 (80)	0	0	0	0	0

Table 15. Phosphate (P<sub>2</sub>O<sub>5</sub>) Rate for Soybeans

Soil Test	Yield Potential (bu/acre)				
	30	40	50	60	70
ppm (lb/acre)	Pounds P <sub>2</sub> O <sub>5</sub> /acre				
5 (10)	75	80	90	100	105
10 (20)	50	55	65	75	80
15-30 (30-60)	25	30	40	50	55
35 (70)	10	15	25	25	30
40 (80)	0	0	0	0	0

Table 16. Phosphate (P<sub>2</sub>O<sub>5</sub>) Rate for Wheat

Soil Test	Yield Potential (bu/acre)				
	50	60	70	80	90
ppm (lb/acre)	Pounds P <sub>2</sub> O <sub>5</sub> /acre				
5 (10)	80	90	95	100	105
10 (20)	55	65	70	75	80
15-30 (30-60)	30	40	45	50	55
35 (70)	15	20	20	25	30
40 (80)	0	0	0	0	0

Table 17. Phosphate (P<sub>2</sub>O<sub>5</sub>) Rate for Alfalfa

Soil Test	Yield Potential (tons/acre)				
	5	6	7	8	9
ppm (lb/acre)	Pounds P <sub>2</sub> O <sub>5</sub> /acre				
5 (10)	115	130	140	185	165
10 (20)	90	105	115	130	140
15-30 (30-60)	65	80	90	105	115
35 (70)	35	40	45	50	60
40 (80)	0	0	0	0	0

### Phosphorus Index (P Index) Risk Assessment Procedure

The P Index is a procedure that combines well-established factors that influence the runoff of phosphorus to surface waters. Each of the factors is evaluated based on site-specific data and weighted according to its overall effect on phosphorus transport. Each of the site subvalues are added together to establish an overall site rating of low, moderate, high, or very high risk.

In most cases the use of the P Index will allow higher rates of phosphorus application than the Phosphorus Soil Test Risk Assessment Procedure. The use of the P Index should be viewed as a continuous measure until other alternatives can be developed to utilize excess phosphorus produced on the farm.

#### Purpose:

The P Index is a planning tool designed to help identify fields or areas of fields on a farm that have a higher or lower risk of phosphorus runoff from manure or other organic materials. Based on the risk assessment the appropriate land treatment and nutrient application treatments can be planned to minimize phosphorus transport from the site.

#### Procedure:

Use the P Index Assessment Procedure Worksheet to determine the site's overall P Index. Use the following guidance to determine each of the site's subvalues. The subvalues are added together to determine the overall site P Index. The worksheet can be photocopied as needed. A "Field Summary Worksheet" is also available with this procedure to record a series of site/field values for a given farm. It can be photocopied as needed.

1. **SOIL EROSION** – Sheet and rill erosion as measured by the Revised Universal Soil Loss Equation (RUSLE) [USDA-NRCS (2001) National Soil Survey handbook, Section 618.55] or Wind Erosion Prediction Procedure (where wind erosion is the primary concern) [USDA-NRCS (2001) National Soil Survey handbook, Section 618.72]. Determine the predicted soil loss and multiply by (1) to determine the "soil loss" site subvalue.

2. **CONNECTIVITY TO WATER** – Defines the vulnerability of P to be transferred from the site to a perennial stream or water body. The more closely connected the runoff is from the field via concentrated flow (from a defined grassed waterway or surface drain) to a perennial stream or water body the higher the vulnerability of P transport. To determine the "connectivity to water" site subfactor ask the question: Does concentrated flow (via a defined waterway, tile inlet, or surface drain) leave the site? Read the value definitions to determine the site's "connectivity to water" subvalue.

3. **RUNOFF CLASS** – This represents the effect of the Hydrologic Soil Group (A, B, C, D) combined with the effect of slope. This factor represents the site's runoff vulnerability. Use the table below to determine the runoff class. The runoff class is the site's subvalue.

**Table 18. Runoff Class Matrix – Phosphorus Index Values**

Slope Range	Hydrologic Soil Group			
	A	B	C	D
<1%	0	1	3	6
1-3%	1	2	4	7
4-6%	2	3	5	8
7-10%	3	5	7	10
11-15%	4	6	9	12
>15%	6	8	11	15

4. SOIL "P" TEST (BRAY-KURTZ P1) – The soil test procedure using the Bray P1 extraction, or other extraction test calibrated to Bray P1, that provides an index of plant available P expressed in either ppm or lbs/acre (ppm x 2 = lbs/acre). Determine the Bray P1 value in ppm and multiply the ppm by (0.07) to determine the soil P test site subvalue.
5. FERTILIZER  $P_2O_5$  APPLICATION RATE – The amount of manufactured (commercial) phosphate fertilizer applied expressed in lbs/acre of  $P_2O_5$ . To determine the site's subvalue multiply the year's P fertilizer application rate by (0.05).
6. FERTILIZER  $P_2O_5$  APPLICATION METHOD – Defines if the phosphate ( $P_2O_5$ ) fertilizer is actually incorporated into the soil and the time interval between application and incorporation or if the fertilizer is applied over a given amount of crop residue. Incorporation or injection with the fertilizer application equipment or using a tillage tool operated a minimum of 3-4 inches deep to incorporate the  $P_2O_5$  fertilizer. To determine the site's subvalue select the description that most closely describes the method of application. The value with that description is the site's subvalue.
7. ORGANIC  $P_2O_5$  APPLICATION RATE – The amount of phosphate applied (expressed in lbs/acre of  $P_2O_5$ ) from manure, sludge, or other bio-solids. To determine the site's subvalue multiply the year's P fertilizer application rate by (0.06).
8. ORGANIC  $P_2O_5$  APPLICATION METHOD – Defines if the phosphate ( $P_2O_5$ ) from the manure, sludge, or other bio-solids is actually incorporated into the soil, the time interval between application and incorporation, or if the manure/bio-solids are applied over a given amount of crop residue. Incorporation or injection with the application equipment or by using a tillage tool operated a minimum of 3-4 inches deep to incorporate the manure, sludge, or other bio-solids. To determine the site's subvalue select the description that most closely describes the method of application. The value with that description is the site's subvalue.
9. BUFFER STRIP – Deduct 2 points if field runoff flows via sheet flow through a designed filter strip – minimum 35 feet wide. For the type of buffer strip that is limited to the use of filter strips only, it is critical that sheet flow crosses the filter strip, not concentrated flow, to credit a 2 point deduction.

Table 19. Phosphorus Index Risk Assessment Procedure Worksheet

Site Characteristic	Phosphorus Vulnerability Values				
1. Soil Erosion	Soil Loss (tons/acre/year) * 1.0'				
2. Connectivity to Water – Does concentrated flow (via a defined waterway, tile inlet, or surface drain) leave the site?	No, and the site is not adjacent to an intermittent or perennial stream. Value = 0	No, but the site is adjacent to an intermittent or perennial stream. Value = 4.0	Yes, but the site is intermittent or perennial. Value = 8.0	Yes, and the site is adjacent to and/or the concentrated flow outlets into an intermittent stream or through a tile inlet. Value = 12.0	Yes, and the site is adjacent to and/or the concentrated flow outlets into a perennial stream or through a tile inlet; OR outlets to a pond or lake within 1 mile. Value = 16.0
3. Runoff Class	See Runoff Class Matrix				
4. Soil Test Bray-Kurtz P1 ppm	Bray-Kurtz P1 (ppm) * (0.07)				
5. Fertilizer $P_2O_5$ Application Rate	Fertilizer $P_2O_5$ Applied (lbs/acre) * (0.05)				
6. Fertilizer $P_2O_5$ Application Method	0 Applied Value = 0	Immediate incorporation OR Applied on 80% cover Value = 0.75	Incorporation <1 week OR Applied on 50-80% cover Value = 1.5	Incorporation >1 week & <3 months OR Applied on 30-49% cover Value = 3.0	No incorporation OR Incorporation >3 months OR Applied on <30% cover Value = 6.0

Site Characteristic	Phosphorus Vulnerability Values				
7. Organic P <sub>2</sub> O <sub>5</sub> Application Rate	Available – Manure/Biosolids P <sub>2</sub> O <sub>5</sub> Applied (lbs/acre) * (0.06)				
8. Organic P <sub>2</sub> O <sub>5</sub> Application Method	0 Applied Value = 0	Immediate incorporation OR Applied on 80% cover Value = 0.5	Incorporation <1 week OR Applied on 50-80% cover Value = 1.0	Incorporation >1 week & <3 months OR Applied on 30-49% cover Value = 2.0	No incorporation OR Incorporation >3 months OR Applied on <30% cover Value = 4.0
Buffer Strip Factor (Deduct 2 points if field runoff flows through a designed filter strip – minimum 35 feet wide)					
TOTAL SITE INDEX VALUE =					
Field Vulnerability for Phosphorus Loss to Surface Water					
Phosphorus Index for Field	Generalized Interpretation of Phosphorus Index & Management				
LOW < 15	LOW potential for P movement from the field. If farming practices are maintained at the current level there is a low probability of an adverse impact to surface waters from P loss. Manure or other biosolids can be applied to meet the recommended nitrogen for the next grass crop or nitrogen removal of the next legume crop.				
MEDIUM 15-30	MEDIUM potential for P movement from the field. The chance of organic material and nutrients getting into surface water exists. Runoff reduction practices such as buffers, setbacks, lower manure/biosolids rates, cover crops, and crop residue practices alone or in combination should be considered to reduce P loss impacts. Manure or other biosolids can be applied to meet the recommended nitrogen for the next grass crop or nitrogen removal of the next legume crop. Applications of P at the crop removal rate should be considered.				
HIGH 31-45	HIGH potential for P movement from the field and for an adverse impact on surface waters unless remedial action is taken. Runoff reduction practices such as buffers, setbacks, lower manure/biosolids rates, cover crops, and crop residue practices alone or in combination should be considered to reduce P loss impacts. Limit application of P to crop removal rates for one year.				
VERY HIGH > 45	VERY HIGH potential for P movement from the field and an adverse impact on surface water. Remedial action is required to reduce the risk of P loss. A complete soil and water conservation system is needed. Apply no additional P.				



**Phosphorus Soil Test Risk Assessment Procedure  
Nitrogen and Phosphorus Application Criteria for Manure**

**Criteria Application to All Soil Test Levels:**

1. Nitrogen application rates from manure shall be based on Total Ammonium Nitrogen content plus 1/3 of the Organic Nitrogen content calculated at time of application when applied during the summer, fall, or winter for spring planted crops. When applied in the spring for spring planted crops the nitrogen application rate can be adjusted to apply the recommended nitrogen within the  $P_2O_5$ ,  $K_2O$ , and other limitations.
2. Nitrogen rates are not to exceed the succeeding crop's recommended Nitrogen for non-legume crops or the Nitrogen removal in the crop's biomass for legume crops.
3. All applications are based on current soil test results (not more than 3 years old).
4. No manufactured  $P_2O_5$  applied above 40 ppm Bray P1 or equivalent test, unless recommended by appropriate industry standards or the land grant universities for specialty crops, vegetable crops, etc.
5. Manure shall be applied in accordance with the restrictions and setbacks in this permit.

Table 20. Phosphorus Soil Test Risk Assessment

"P" Soil Test Level	Application Criteria
Bray P1 < 40 ppm (<80 lbs/acre) OR Other equivalents (e.g., Mehlich 3)	Recommended N or $P_2O_5$ . Manure can be applied to meet the succeeding crop's recommended nitrogen requirements for non-legume crops or the nitrogen removal for legume recommended $P_2O_5$ but not to exceed the nitrogen needs of the succeeding crop.
Bray P1 40-100 ppm (80-200 lbs/acre) OR Other equivalents (e.g., Mehlich 3)	Recommended N or $P_2O_5$ Removal whichever is less. The field shall have >30% ground cover at the time of application or the manure shall be incorporated within one week. The manure can be applied to meet the succeeding crop's recommended nitrogen requirements for non-legume crops or the nitrogen removal for legume crops; or $P_2O_5$ removal (annual or multiple year applications) whichever is less.
Bray P1 100-150 ppm (200-300 lbs/acre) OR Other equivalents (e.g., Mehlich 3)	Recommended N or $P_2O_5$ Removal whichever is less. Manure shall be applied so as not to exceed the succeeding crop's recommended nitrogen requirements for non-legume crops or the nitrogen removal for legume crops. In addition a multiple year application of Phosphorus is not authorized.
Bray P1 > 150 ppm (> 300 lbs/acre) OR Other equivalents (e.g., Mehlich 3)	1. No additional $P_2O_5$ – Use $P_2O_5$ draw-down strategies; or 2. Shall use the Phosphorus Index Risk Assessment Procedure in Part VII, C.

**Table 21. Most Limiting Manure Application Rates for Tiled Fields**

Select the Most Limiting Application Rate Based on the Following Criteria					
Field Situation & Time of Year	Limiting Application Rate Criteria				
	Nitrogen	P <sub>2</sub> O <sub>5</sub> <sup>4</sup>	K <sub>2</sub> O	Tons/acre Gallons/acre	Available Water Capacity Table
<b>Subsurface Drained (Tiled) Fields</b>					
(Apr-Jun) Subsurface Drained or High N Leaching Potential	<sup>1</sup> Crop needs factoring N losses	Crop needs or crop removal <250 lbs/acre	Crop needs or crop removal <500 lbs/acre	13,000 gal/acre	Upper 8"
(Apr-Jun) Pasture >20% or Cropland >15% Subsurface Drained or High N Leaching Potential	<sup>1</sup> Crop needs factoring N losses	Crop needs or crop removal <250 lbs/acre	Crop needs or crop removal <500 lbs/acre	<sup>5</sup> 10 wet tons, 5,000 gal/acre unless contoured strips or incorporated immediately	Upper 8"
(Jul-Sep) No Growing Crop Subsurface Drained or High N Leaching Potential	<sup>2</sup> 50 lbs/acre as applied N	Crop needs or crop removal <250 lbs/acre	Crop needs or crop removal <500 lbs/acre	13,000 gal/acre	Upper 8"
(Jul-Sep) With a Growing Cover Crop Subsurface Drained or high N Leaching Potential	<sup>3</sup> Next year's crop needs as applied N	Crop needs or crop removal <250 lbs/acre	Crop needs or crop removal <500 lbs/acre	13,000 gal/acre	Upper 8"
(Jul-Sep) No Growing Crop, Cropland >15% Subsurface Drained or High N Leaching Potential	<sup>2</sup> 50 lbs/acre as applied N	Crop needs or crop removal <250 lbs/acre	Crop needs or crop removal <500 lbs/acre	13,000 gal/acre	Upper 8"
(Oct-Mar) Subsurface drained or High N Leaching Potential	<sup>3</sup> Next year's crop needs as applied N	Crop needs or crop removal <250 lbs/acre	Crop needs or crop removal <500 lbs/acre	13,000 gal/acre	Upper 8"
(Oct-Mar) Pasture >20% or Cropland >15% Subsurface Drained or High N Leaching Potential	<sup>3</sup> Next year's crop needs as applied N	Crop needs or crop removal <250 lbs/acre	Crop needs or crop removal <500 lbs/acre	<sup>5</sup> 10 wet tons, 5,000 gal/acre – unless contoured strips or incorporated immediately	Upper 8"
Frozen or Snow-Cover Subsurface Drained or High N Leaching Potential	<sup>3</sup> Next year's crop needs as applied N	Crop needs or crop removal <250 lbs/acre	Crop needs or crop removal < 500 lbs/acre	<sup>5</sup> 10 wet tons < 50% solids, 5 wet tons > 50% solids, liquid manure 5,000 gal/acre	
<sup>1</sup> Crop needs factoring N losses – Maximum total nitrogen applied to meet the succeeding crop's recommended nitrogen requirements for non-legume crops or 150 lbs/acre nitrogen for the succeeding legume crop. Considers loss of N through application method and time of year.					
<sup>2</sup> 50 lbs/acre as applied N – Nitrogen application limited to 50 lbs/acre based in the addition of the NH <sub>4</sub> (ammonium/ammonia) content of the manure + 1/3 of the organic nitrogen content of the manure as applied. Considers no losses due to application method or time of year.					
<sup>3</sup> Next year's crop needs as applied N – Maximum total nitrogen applied to meet the succeeding crop's recommended nitrogen requirements for non-legume crops or 150 lbs/acre nitrogen for the succeeding legume crop. Considers no losses due to application method or time of year.					
<sup>4</sup> Under special conditions and criteria the rate of P <sub>2</sub> O <sub>5</sub> application can be increased to 500 lbs/acre (See Part VII, A, 4, h, (3), iii). Frozen or snow-covered ground and field over 100 ppm Bray P1 soil test are exempt and are always limited to applications less than or equal to 250 lbs/acre P <sub>2</sub> O <sub>5</sub> .					
<sup>5</sup> Wet tons refers to the weight of the manure as it is applied – including solids and moisture weight.					

Table 22. Most Limiting Manure Application Rates for Non-Tiled Fields

Select the Most Limiting Application Rate Based on the Following Criteria					
Field Situation & Time of Year	Limiting Application Rate Criteria				
	Nitrogen	P <sub>2</sub> O <sub>5</sub> <sup>4</sup>	K <sub>2</sub> O	Tons/acre Gallons/acre	Available Water Capacity Table
Non Subsurface Drained (Tiled) Fields					
(Apr-Jun) Not Subsurface Drained Pasture >20% or Cropland >15%	<sup>1</sup> Crop needs factoring N losses	Crop needs or crop removal <250 lbs/acre	Crop needs or crop removal <500 lbs/acre	<sup>5</sup> 10 wet tons, 5,000 gal/acre unless contoured strips or incorporated immediately	Upper 8"
(Jul-Sep) Not Subsurface Drained	<sup>1</sup> Crop needs factoring N losses	Crop needs or crop removal <250 lbs/acre	Crop needs or crop removal <500 lbs/acre		Upper 8"
(Jul-Sep) Not Subsurface Drained Pasture >20% or Cropland >15%	<sup>1</sup> Crop needs factoring N losses	Crop needs or crop removal <250 lbs/acre	Crop needs or crop removal <500 lbs/acre		Upper 8"
(Oct-Mar) Not Subsurface Drained	<sup>1</sup> Crop needs factoring N losses	Crop needs or crop removal <250 lbs/acre	Crop needs or crop removal <500 lbs/acre		Upper 8"
(Oct-Mar) Not Subsurface Drained Pasture >20% or Cropland >15%	<sup>1</sup> Crop needs factoring N losses	Crop needs or crop removal <250 lbs/acre	Crop needs or crop removal <500 lbs/acre	<sup>5</sup> 10 wet tons, 5,000 gal/acre – unless contoured strips or incorporated immediately	Upper 8"
Frozen or Snow-Cover Not Subsurface Drained	<sup>1</sup> Next year's crop needs factoring N losses	Crop needs or crop removal <250 lbs/acre	Crop needs or crop removal < 500 lbs/acre	<sup>5</sup> 10 wet tons < 50% solids, 5 wet tons > 50% solids, liquid manure 5,000 gal/acre	
<sup>1</sup> Crop needs factoring N losses – Maximum total nitrogen applied to meet the succeeding crop's recommended nitrogen requirements for non-legume crops or 150 lbs/acre nitrogen for the succeeding legume crop. Considers loss of N through application method and time of year.					
<sup>4</sup> Under special conditions and criteria the rate of P <sub>2</sub> O <sub>5</sub> application can be increased to 500 lbs/acre (See Part VII, A, 4, h, (3), iii). Frozen or snow-covered ground and field over 100 ppm Bray P1 soil test are exempt and are always limited to applications less than or equal to 250 lbs/acre P <sub>2</sub> O <sub>5</sub> .					
<sup>5</sup> Wet tons refers to the weight of the manure as it is applied – including solids and moisture weight.					

## Ohio EPA CAFO NPDES Permit Manure Management Plan Signature Page

The Manure Management Plan submitted for review and approval by Ohio EPA shall be signed in accordance with the following as required in 40 CFR 122.22:

(1) For a corporation. By a responsible corporate officer. For the purpose of this section, a responsible corporate officer means: (i) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

Note: EPA does not require specific assignments or delegations of authority to responsible corporate officers identified in Sec. 122.22(a)(1)(i). The Agency will presume that these responsible corporate officers have the requisite authority to sign permit applications unless the corporation has notified the Director to the contrary. Corporate procedures governing authority to sign permit applications may provide for assignment or delegation to applicable corporate positions under Sec. 122.22(a)(1)(ii) rather than to specific individuals.

(2) For a partnership or sole proprietorship. By a general partner or the proprietor, respectively; or

(3) For a municipality, State, Federal, or other public agency. By either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes: (i) The chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of EPA).

All reports required by permits, and other information requested by the Director shall be signed by a person described in paragraph (a) of this section, or by a duly authorized representative of that person.

A person is a duly authorized representative only if:

(1) The authorization is made in writing by a person described in paragraph (a) of this section;

(2) The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company, (A duly authorized representative may thus be either a named individual or any individual occupying a named position.) and,

(3) The written authorization is submitted to the Director.

Changes to authorization. If an authorization under paragraph (b) of this section is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of paragraph (b) of this section must be submitted to the Director prior to or together with any reports, information, or applications to be signed by an authorized representative.

Certification. Any person signing a document under paragraph (a) or (b) of this section shall make the following certification:

*"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."*

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Signature

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Date

## Ohio EPA CAFO NPDES Water Quality Monitoring

This form may be applicable for CAFOs covered under an individual permit that includes water quality monitoring of storm water from the production area. A grab sample shall be collected from the location specified in the permit during the months of May and November during the first 30 minutes of a rainfall event that causes a discharge from the sampling outfall. If collection of the grab sample during the first 30 minutes is inappropriate due to dangerous weather conditions, collect the sample as soon as possible after suitable conditions occur, and document the reason for delay.

Date of Sample: May / November \_\_\_\_\_

Time of Sample Collection: \_\_\_\_\_

Location of Sample: \_\_\_\_\_

Initials/Name of Sample Collector: \_\_\_\_\_

Was Sample Collected Within First 30 Minutes of Rainfall? Yes No

If No, Reason for Delay: \_\_\_\_\_

Was Sample Analyzed for BOD5, Total Suspended Solids, Ammonia, TKN, and Total Phosphorus?

Yes No

Are Laboratory Results Attached? Yes No

(Note the results should indicate the date the analyses were performed, the time the analyses were initiated, the initials or name of the individuals who performed the analyses, and the references for the analytical techniques or methods used. The laboratory should analyze the samples according to the test procedures approved under 40 CFR Part 136.)

Comments: \_\_\_\_\_

The precipitation at the facility should be recorded for two days prior to the sample collection and the day of the collection.

Total Precipitation Two Days Before Sample Collection: \_\_\_\_\_ inches

Total Precipitation One Day Before Sample Collection: \_\_\_\_\_ inches

Total Precipitation Day of Sample Collection: \_\_\_\_\_ inches



## **Ohio EPA CAFO NPDES Permit Storm Water Pond Outfall Monitoring**

Notice – This form should only be included in the manure management plan for facilities with storm water ponds that contain a discharge to surface waters that receive runoff from the production area. These ponds should only be receiving storm water associated with industrial activity and not manure, silage leachate, process wastewater, or any other wastewater. Storm water ponds receiving plate cooling water or other non-contact cooling water should be permitted and monitored under specific requirements in the NPDES permit that pertain to the non-contact cooling water discharge.

## Ohio EPA CAFO NPDES Permit Storm Water Pond Outfall Monitoring

Where applicable, a storm water pond located at the CAFO production area that has a discharging outlet to waters of the State shall be monitored through biannual water quality sample collection. A grab sample shall be collected from the outlet pipe during the months of March and November during the first 30 minutes of a rainfall event that causes the pond to discharge. If collection of the grab sample during the first 30 minutes is inappropriate due to dangerous weather conditions, collect the sample as soon as possible after suitable conditions occur, and document the reason for delay.

Date of Sample: March / November \_\_\_\_\_

Time of Sample Collection: \_\_\_\_\_

Location of Sample: \_\_\_\_\_

Initials/Name of Sample Collector: \_\_\_\_\_

Was Sample Collected Within First 30 Minutes of Rainfall? Yes No

If No, Reason for Delay: \_\_\_\_\_

Was Sample Analyzed for BOD5, Ammonia, TKN, and Total Phosphorus? Yes No

Are Laboratory Results Attached? Yes No

(Note the results should indicate the date the analyses were performed, the time the analyses were initiated, the initials or name of the individuals who performed the analyses, and the references for the analytical techniques or methods used. The laboratory should analyze the samples according to the test procedures approved under 40 CFR Part 136.)

Comments: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

## Ohio EPA CAFO NPDES Permit Production Area Discharge Monitoring

In the event that a spill, discharge, or overflow of manure occurs at any time from the production area to waters of the State, a water quality sample of the discharge shall be collected, Ohio EPA must be notified, and a follow up incident report must be submitted to Ohio EPA.

### Water Quality Sampling

Within the first **30 minutes** of the first knowledge of a discharge to waters of the State, a grab sample must be collected where the spill is entering the surface water (e.g., tile outlet discharge, concentrated flow surface flow into surface water, etc.). If sampling of the discharge within the first 30 minutes is inappropriate due to dangerous weather conditions, collect the sample as soon as suitable conditions occur and document the reason for delay.

Date of Sample: \_\_\_\_\_

Time of Sample Collection: \_\_\_\_\_

Initials/Name of Sample Collector: \_\_\_\_\_

Was Sample Collected Within First 30 Minutes of Discovery?                      Yes                      No

If No, Reason for Delay: \_\_\_\_\_

Was Sample Analyzed for BOD5, Ammonia, and Total Phosphorus?                      Yes                      No

Are Laboratory Results Attached?    Yes                      No

(Note the results should indicate the date the analyses were performed, the time the analyses were initiated, the initials or name of the individuals who performed the analyses, and the references for the analytical techniques or methods used. The laboratory should analyze the samples according to the test procedures approved under 40 CFR Part 136.)

### Ohio EPA Notification

Ohio EPA should be notified as soon as possible but no later than the first **24 hours** of first knowledge of a discharge to waters of the State by calling the Spill Hotline at **1-800-282-9378**.

Was Ohio EPA Spill Hotline Contacted?                      Yes                      No

### Incident Report

Within **14 days** of the discharge occurrence, a report must be submitted to Ohio EPA, Central Office, Division of Surface Water, P.O. Box 1049, Columbus, Ohio 43216-1049 that contains, at a minimum, the following information:

- ☐ Copy of Water Quality Sample Results
- ☐ Description of Reason For Discharge
- ☐ Location of Incident
- ☐ Estimate of Quantity and Duration of Discharge
- ☐ Quantity and Duration of Precipitation Prior to Incident
- ☐ Measures Taken to Remediate the Discharge
- ☐ Measures Taken to Prevent Reoccurrence

If the water quality sample results are not available at the time the report is submitted, they shall be submitted within 5 days of receipt from the laboratory.

Was a Complete Report Submitted to Ohio EPA?                      Yes                      No

Copy of Report Attached?                      Yes                      No

Date of Report Submittal: \_\_\_\_\_

## Ohio EPA CAFO NPDES Permit Manure Application on Frozen/Snow Covered Ground Records

The following records shall be maintained in addition to regular records for all instances of surface application of manure on frozen/snow covered ground. Other locations for manure disposal should be investigated prior to the land application. Stockpiling of solid manure shall be utilized rather than spreading on the field. Only limited quantities of manure shall be applied to address manure storage limitations until non-frozen or non-snow covered soils are available for manure application.

<b>Date of Application</b>			
<b>Location of Application</b>			
<b>Amount of Manure Applied (Gallons/Tons)</b>			
<b>Number of Acres</b>			
<b>Weather Conditions – 24 Hours Prior</b>	<b>Temperature</b>	<b>Precipitation</b>	<b>Chance of Precipitation (%)</b>
<b>Weather Conditions – Day Of Application</b>	<b>Temperature</b>	<b>Precipitation</b>	<b>Chance of Precipitation (%)</b>
<b>Weather Conditions – 24 hours After</b>	<b>Temperature</b>	<b>Precipitation</b>	<b>Chance of Precipitation (%)</b>
<b>Soil Conditions</b>	<b>Depth of Snow Cover</b>		
	<b>Frozen? Estimated Depth of Frozen Layer</b>		
	<b>Surface Residue Cover (Type and Percentage)</b>		
	<b>Field Slope</b>		
	<b>Available Water Capacity</b>		
<b>Setbacks Maintained? (200 feet from surface waters &amp; conduits to surface waters)</b>			
<b>Reason for Applying Manure</b>			

Concentrated field surface drainage and tile outlets shall be visually monitored at the conclusion of the manure application, and periodically afterwards when weather is likely to produce manure runoff including when temperatures rise, snow melts, and in conjunction with rainfall, etc., until the manure has been assimilated into the field and is no longer likely to discharge into waters of the State.

<b>Date of Field Inspection</b>	<b>Weather Conditions</b>	<b>Signs of Discharge</b>

## Ohio EPA CAFO NPDES Permit Monitoring and Inspection Requirements

Action	Frequency	Record Keeping Requirements
Collection of water quality samples from discharges from the production area. Samples should be analyzed for BOD5, ammonia, and total phosphorus.	Each time they occur.	Date, exact place, and time of sampling or measurements; b) the initials or name(s) of the individual(s) who performed the sampling or measurements; c) the date(s) analyses were performed; d) the time(s) analyses were initiated; e) the initials or name(s) of the individual(s) who performed the analyses; f) references and written procedures, when available, for the analytical techniques or methods used; and g) the results of such analyses, including the bench sheets, instrument readouts, computer disks or tapes, etc., used to determine these results. Please note that most of these records are included on the sample result sheets from the laboratory.
For new CAFOs (and existing CAFOs on and after April 1, 2007), collection of water quality samples from discharges from land application areas where manure was applied on frozen and/or snow covered ground. Samples should be analyzed for ammonia.	Each time they occur.	Same records for production area discharge samples listed above.
Recording of all discharges from production and land application areas in the operating records.	Each time they occur.	Cause, volume, and duration of the discharge and any corrective actions needed and the dates those actions were taken. Also maintain a copy of the report submitted to Ohio EPA.
Collection of water quality discharges from storm water ponds. Samples should be analyzed for BOD5, ammonia, TKN, and total phosphorus.	Twice per year in March and November.	Same records for production area discharge samples listed above.
Collection of representative manure samples for all manure storage or treatment structures. Samples should be analyzed for total nitrogen, ammonium nitrogen, organic nitrogen, phosphorus, potassium, and percent total solids.	Once per year.	Same records for production area discharge samples listed above.
Collection of soil samples of the manure application fields. Samples should be analyzed for pH, phosphorus, potassium, calcium, magnesium and cation exchange capacity.	Every three years.	Collection site and depth of sample. Same records for production area discharge samples listed above.
Monitor operating level of all manure storage or treatment facilities.	Once per week.	Date and time of observation, manure level in each structure.
Inspect manure storage or treatment facilities, including devices channeling contaminated storm water to the manure storage or treatment facility for evidence of erosion, leakage, animal damage, overflow, or discharge.	Once per week.	Date and time of inspection, structural integrity, vegetation condition, and any corrective actions needed and the dates those actions were taken.
Inspect storm water diversion devices or runoff diversion structures.	Once per week.	Date and time of inspection, observations of flow quantity and color, structural integrity (e.g., signs of cracks, sparse or stressed vegetation, erosion, etc.), any corrective actions needed and the dates those actions were taken.
Inspect drinking and cooling water lines that are located above ground, readily visible or accessible for daily inspections.	Daily.	Date and time of inspection, number of leaks, any corrective actions needed and the dates those actions were taken.
Monitor forecast at the CAFO location.	Every land application event.	Date, weather conditions (including percentage chance of precipitation) 24 hours prior to application, at the time of application, and 24 hours after application.
Inspect land application fields.	In accordance with manure management plan.	Date and signs of discharge or runoff into surface waters and/or conduits to surface waters of the State.
Inspect land application equipment.	In accordance with manure management plan.	List of equipment, date of inspections, corrective actions, calibration dates.

Any deficiencies found as a result of these inspections must be corrected as soon as possible. Deficiencies not corrected within 30 days must be accompanied by an explanation of the factors preventing immediate correction.



## Ohio EPA CAFO NPDES Permit Manure Land Application Restrictions

Streams, Lakes, Ponds, Watercourses, Other Surface Waters, Waterways, Open Tile Line Intake Structures, or Other Conduits to Surface Waters
Manure shall not be applied closer than <b>100 feet</b> , unless a 35-foot vegetated buffer has been established where manure application is prohibited. A mandatory 35-foot vegetated buffer must be established along fields with perennial streams regardless of setback requirement.
Public Drinking Water Surface Water Intakes
Land application shall not take place within the <b>emergency management zone</b> of a public water system using surface water. Otherwise, manure shall not be applied closer than <b>300 feet</b> from the edge of the field.
Seasonal Salmonid and Cold Water Habitats
Manure shall not be applied closer than <b>100 feet</b> , unless a 35-foot vegetated buffer has been established where manure application is prohibited.
Public Drinking Water Wells
Land application shall not take place within a <b>highly susceptible drinking water source protection area</b> (as defined by Ohio EPA) for a community public water system using ground water and not within the inner management zone for all other community public water systems using ground water.
Private Drinking Water Wells
For <b>injection application</b> and surface application followed by <b>incorporation within 24 hours</b> , manure shall not be applied closer than <b>100 feet</b> .
For <b>surface application</b> not followed by incorporation within 24 hours, manure shall not be applied closer than <b>300 feet</b> .
Class V Agricultural Drainage Wells, Agricultural Wells, or Sinkholes
For <b>injection application</b> and surface application followed by <b>incorporation within 24 hours</b> , manure shall not be applied closer than <b>100 feet</b> .
For <b>surface application</b> not followed by incorporation within 24 hours, manure shall not be applied closer than <b>300 feet</b> .
Springs
Manure shall not be applied closer than <b>300 feet</b> .
Slope
For fields with a slope <b>less than 15%</b> , surface application can be used when yearly average soil loss is less than five tons per acre or "T", whichever is less.
Manure shall not be applied to cropland <b>over 15%</b> slope or to pasture/hayland <b>over 20%</b> slope unless one of the following precautions are taken:
a. Immediate incorporation or injection with operations done on the contour, unless the field has 80% ground cover (residue or canopy);
b. Applications are timed during periods of lower runoff and/or rainfall (May 20 to October 15);
c. Split applications are made (separated by rainfall events) with single applications not exceeding 5,000 gallons per acre for liquid manure or 10 wet tons per acre for solid manure;
d. The field is established and managed in contour strips with alternated strips in grass or legume.
Stockpiling of Manure
Streams, Lakes, Ponds, Watercourses, Waterways, Open Tile Line Intake Structures, or Other Conduits to Surface Waters, minimum <b>300 feet</b> setback. (Stockpiling within waterways or concentrated flow areas is prohibited.)
Public and Private Wells/Springs, minimum <b>300 feet</b> setback.
Flooding/flood plains/floodways, <b>prohibited</b> .
Public Drinking Water Surface Intakes, minimum <b>1,500 feet</b> setback.
Class V Agricultural Drainage Wells and Sinkholes, minimum <b>300 feet</b> setback.
Slope, <b>0-6% only</b> .

## Ohio EPA CAFO NPDES Permit Manure Land Application Restrictions

<p>Prior to land applying manure, <b>the land application area shall be inspected</b> to determine the suitability of the site for land application (considerations shall include tile location and depth, soil type, evidence of soil cracking, available water capacity of the soil, crop maturity, prior precipitation, forecasted precipitation, etc.) and field conditions shall be documented at the time of the inspection. Broken tiles or blow out holes shall be repaired prior to land application.</p>
<p>For fields with <b>soil cracks</b> greater than six inches deep, the soil must be tilled before the land application of liquid manure or the application must be delayed until the cracks are sealed. However, liquid manure applications may be made on tiled fields with growing crops if the application rate is less than or equal to a quarter of an inch or 6,700 gallons per acre and tile plugs are used or tile stops closed prior to application.</p>
<p>For fields that are <b>prone to flooding</b>, floodplains, or floodways, manure must be injected or incorporated within 24 hours of application. No manure application shall occur during the periods of expected flooding.</p>
<p>Land application of manure shall <b>not cause ponding or runoff</b>. For liquid manure applications, the application shall not exceed the available water capacity in the upper eight inches of the soil in the application field.</p>
<p>Land application shall <b>not occur on saturated soils</b> or during rain or runoff events, and shall not occur if the <b>forecast</b> contains a greater than <b>50% chance of precipitation</b> for any individual hour, for a period extending 24 hours after the commencement of land application.</p>
<p>If solid manure is applied on <b>conventionally tilled bare soil</b>, the manure shall be incorporated into the soil within two days after application on the land. This requirement does not apply to no-till fields, or fields where crops are actively growing.</p>
<p>Manure application shall not take place on fields where <b>soil loss</b> exceeds "T".</p>
<p>For land application sites with <b>subsurface tile drainage</b>, all field outlets shall be visually monitored before, during and after application of manure to the site and the results of that monitoring shall be recorded. Methods/devices to stop or capture subsurface drain flow shall be accessible. If manure reaches the subsurface drain outlet to waters of the State, the application of manure shall cease and the flow stopped or captured.</p>
<p>For land application of liquid manure to sites with <b>subsurface tile drainage</b>, the following criteria must be followed:</p> <ol style="list-style-type: none"> <li>Application rates shall be less than or equal to half an inch or 13,000 gallons per acre per application event.</li> <li>A tool shall be used that can disrupt and/or close the preferential flow paths in the soil using horizontal fracturing, or the surface of the soil shall be tilled three to five inches deep to a seedbed condition to soak up the liquid manure and keep it out of preferential flow channels.</li> <li>If injection is used, manure shall only be injected deep enough to cover manure with soil. The soil shall be tilled at least three inches below the depth of injection prior to application.</li> <li>For fields with growing crops or continuous no till fields where tillage is not an option, all tile outlets from the application area are to be plugged/tile stops closed prior to application.</li> </ol>
<p>Manure shall be managed in such a manner to prevent land application on <b>frozen or snow covered ground</b>. Failure to take appropriate action to avoid land application on frozen and/or snow covered ground is a violation of the Ohio NPDES permit and subject to enforcement.</p> <p>If practical, manure should be injected and/or incorporated within 24 hours to minimize surface manure runoff. Where manure is not injected or incorporated within 24 hours, the following frozen and/or snow covered ground restrictions are mandatory. Other locations for manure disposal should be investigated prior to the land application. Stockpiling of solid manure shall be utilized rather than spreading on the field. Only limited quantities of manure shall be applied to address manure storage limitations until non-frozen or non-snow covered soils are available for manure application. Records must be maintained for all instances of application on frozen or snow covered ground that include: date, amount applied, location, acres applied to, weather and soil conditions including depth of snow cover, surface residue cover, and reason for applying manure at that time.</p> <p>In addition to all other land application restrictions in the NPDES permit (restrictions on fields prone to flooding, not causing ponding or runoff, restrictions on saturated soils, and requirement for tiled fields), the following criteria must also be met for surface manure application on frozen or snow covered ground per application event per field per winter season:</p> <ol style="list-style-type: none"> <li>The field must have greater than or equal to ninety percent surface residue cover at the time of application, and vegetation/residue shall not be completely covered by ice and/or snow at the time of application.</li> <li>The maximum manure application rate is 5,000 gallons per acre for liquid manure, 10 wet tones per acre for solid manure with more than 50% moisture, and 5 wet tons per acre for solid manure with less than 50% moisture. Depending on soil hydrologic group and surface residue cover, the liquid manure application rate on frozen soils may need to be lowered to prevent ponding or runoff.</li> <li>Manure shall not be applied on more than twenty contiguous acres. Contiguous areas for application are to be separated by a break of at least 200 feet. Areas used for application are the be the furthest from surface waters and present the least potential for runoff.</li> <li>Setbacks from surface waters and conduits to surface waters (including grassed waterways and surface drains) must be a minimum of 200 feet. This setback shall also have at least 90% surface residue cover, and vegetation/residue shall not be completely covered by ice and/or snow at the time of application. This distance may need to be further increased due to local conditions and other setback restrictions.</li> <li>For fields with slopes greater than 6%, manure shall be applied in alternating strips 60 to 200 feet wide generally on the contour, or in the case that the field is managed in contour strips with alternative strips in grass or legume, manure shall only be applied on alternative strips. Note that the application rate shall be determined for each separate application strip area, not area of entire field.</li> <li>Manure phosphate applications exceeding 250 pounds per acre are prohibited.</li> </ol> <p>Concentrated field surface drainage and tile outlets shall be visually monitored at the conclusion of the manure application, and periodically afterwards when weather is likely to produce manure runoff including when temperatures rise, snow melts, and in conjunction with rainfall, etc., until the manure has been assimilated into the field and is no longer likely to discharge into waters of the State.</p>

## Ohio EPA CAFO NPDES Permit Land Application Area Discharge Monitoring

### Non Frozen/Snow Covered Ground

In the event that a spill or discharge manure occurs at any time from a land application area to waters of the State that is not agricultural storm water, Ohio EPA must be notified and a follow up report must be submitted to Ohio EPA.

### Ohio EPA Notification

Ohio EPA should be notified as soon as possible but no later than the first **24 hours** of first knowledge of a discharge to waters of the State by calling the Spill Hotline at **1-800-282-9378**.

Was Ohio EPA Spill Hotline Contacted?                      Yes                      No

### Incident Report

Within **14 days** of the discharge occurrence, a report must be submitted to Ohio EPA, Central Office, Division of Surface Water, P.O. Box 1049, Columbus, Ohio 43216-1049 that contains, at a minimum, the following information:

- ☐ Description of Reason For Discharge
- ☐ Location of Incident
- ☐ Estimate of Quantity and Duration of Discharge
- ☐ Quantity and Duration of Precipitation Prior to Incident
- ☐ Land Application Records
- ☐ Measures Taken to Remediate the Discharge
- ☐ Measures Taken to Prevent Reoccurrence

Was a Complete Report Submitted to Ohio EPA?                      Yes                      No

Copy of Report Attached?                      Yes                      No

Date of Report Submittal: \_\_\_\_\_

## Frozen/Snow Covered Ground

In the event that a spill or discharge manure occurs at any time from a land application area to waters of the State from application to frozen and/or snow covered ground, a water quality sample of the discharge shall be collected\*, Ohio EPA must be notified, and a follow up report must be submitted to Ohio EPA.

## Water Quality Sampling

\*For existing CAFOs (on and after April 1, 2007) and new CAFOs, within the first **30 minutes** of the first knowledge of a discharge to waters of the State, a grab sample must be collected where the spill is entering the surface water (e.g., tile outlet discharge, concentrated flow surface flow into surface water, etc.). If sampling of the discharge within the first 30 minutes is inappropriate due to dangerous weather conditions, collect the sample as soon as suitable conditions occur and document the reason for delay.

Date of Sample: \_\_\_\_\_

Time of Sample Collection: \_\_\_\_\_

Initials/Name of Sample Collector: \_\_\_\_\_

Was Sample Collected Within First 30 Minutes of Discovery?                      Yes                      No

If No, Reason for Delay: \_\_\_\_\_

Was Sample Analyzed for Ammonia?                      Yes                      No

Are Laboratory Results Attached?                      Yes                      No

(Note the results should indicate the date the analyses were performed, the time the analyses were initiated, the initials or name of the individuals who performed the analyses, and the references for the analytical techniques or methods used. The laboratory should analyze the samples according to the test procedures approved under 40 CFR Part 136.)

## Ohio EPA Notification

Ohio EPA should be notified as soon as possible but no later than the first **2 hours** of first knowledge of a discharge to waters of the State by calling the Spill Hotline at **1-800-282-9378**.

Was Ohio EPA Spill Hotline Contacted?                      Yes                      No

## Incident Report

Within **14 days** of the discharge occurrence, a report must be submitted to Ohio EPA, Central Office, Division of Surface Water, P.O. Box 1049, Columbus, Ohio 43216-1049 that contains, at a minimum, the following information:

- ☐ Copy of Water Quality Sample Results
- ☐ Description of Reason For Discharge
- ☐ Location of Incident
- ☐ Estimate of Quantity and Duration of Discharge
- ☐ Quantity and Duration of Precipitation Prior to Incident
- ☐ Measures Taken to Remediate the Discharge
- ☐ Measures Taken to Prevent Reoccurrence
- ☐ Land Application Records

If the water quality sample results are not available at the time the report is submitted, they shall be submitted within 5 days of receipt from the laboratory.

Was a Complete Report Submitted to Ohio EPA?                      Yes                      No

Copy of Report Attached?                      Yes                      No

Date of Report Submittal: \_\_\_\_\_

## Ohio EPA CAFO NPDES Permit Incident Report

Within 14 days of a discharge occurrence from either the production or land applications areas, a report must be submitted to Ohio EPA, Central Office, Division of Surface Water, P.O. Box 1049, Columbus, Ohio 43216-1049 that contains, at a minimum, the following information.

<b>Date</b>	
<b>Name of Facility</b>	
<b>NPDES Permit Number</b>	
<b>Date of Incident</b>	
<b>Description of Reason for Discharge</b>	
<b>Location of Incident (Include Latitude and Longitude)</b>	
<b>Estimate of Quantity and Duration of Discharge</b>	
<b>Quantity and Duration of Precipitation Prior to Incident</b>	Day Before: Day Of:
<b>Measures Taken to Remediate the Discharge</b>	
<b>Measures Taken to Prevent the Reoccurrence</b>	
<b>Copy of Water Quality Sample Results Attached (If Applicable)</b>	Yes    No
<b>Copy of Land Application Records Attached (If Applicable)</b>	Yes    No
<b>Signature</b>	

Attach additional pages if necessary.

If the water quality sample results are not available at the time the report is submitted, they shall be submitted within 5 days of receipt from the laboratory.



## Ohio EPA CAFO NPDES Permit Manure Storage Evaluation

Adequate manure storage volume shall be provided and maintained to prevent the necessity of land applying manure on frozen and/or snow covered ground. No later than September 15<sup>th</sup> of each year, an evaluation must be conducted of all manure storage or treatment structures to determine what steps are needed to avoid the need to land apply manure on frozen or snow covered fields for the upcoming winter.

Date of Evaluation:

Storage Structure	Current Volume of Manure in Structure (tons/gallons)	Current Storage Volume Remaining (tons/gallons)	Storage Volume Required for Winter (tons/gallons)	Amount of Manure to Be Removed (tons/gallons)	Description of Manure Disposal/Utilization For Manure to be Removed (tons/gallons)

Comments:

Was this manure removal plan accomplished?

If so, when?

If not, please explain:

**Wilson, Rick**

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**From:** Wilson, Rick  
**Sent:** Friday, September 16, 2016 11:21 AM  
**To:** Exemption 6  
**Cc:** Bruner, Daniel  
**Subject:** August 31, 2016 Inspection Follow-up  
**Attachments:** NPDES MMP Complete Update Packet\_1.pdf; 2IK00023.pdf

Exemption 6:

Following up:

As described during the August 31, 2016 inspection, I am providing you with the NPDES MMP Update Packet that provides references and forms that can help you to meet the terms and conditions of your expired (yet still enforceable) NPDES permit.

I am also attaching a pdf of the correct NPDES permit (The one I shared with you was downloaded from the wrong location...and likewise did not have the correct name on the cover.). This permit transfer was processed on September 9, 2014 with effective date of the August 26, 2014 (the date the transfer paperwork was signed between You and Exemption 6).

As mentioned during the inspection, it was apparent that contaminated production area runoff (from feed storage area) is not contained. Past issues with un-contained production area runoff and discharges of manure to waters of the state are part of the reason this facility is currently regulated as a Medium CAFO by Ohio EPA.

Because your permit is expired, it is important you resolve of renewal (or non-renewal) procedures.

↓At this link↓: you can download and complete the necessary renewal NPDES Applications which will allow for renewal of the Exemption 6 Land Company LLC permit.

<http://epa.ohio.gov/dsw/cafo/index.aspx#126567136-how-to-apply-for-a-cafo-permit>

To renew the NPDES permit the following must be provided to this office:

- Form 1
- Form 2B
- Antidegradation Addendum
- Updated Manure Management Plan (per current herd size, facility conditions, and available systems and land for manure application).
- Administrative processing Fee of \$200 Check payable to "Treasurer, State of Ohio"

If Medium CAFOs can demonstrate that they no longer have discharges to waters of the state from their production area; and the facility has an up-to-date manure management plan (and is following it), then a reevaluation can be done with respect to Ohio EPA permitting authority for NPDES CAFO permit. This reevaluation would allow this office to determine if a NPDES permit is still required, or if the permit can be taken off-the-books through the No-Permit-Required (NPR) process.

Please do not hesitate to call with question comments or concerns  
~rick

Rick Wilson, Environmental Specialist  
Ohio EPA-Division of Surface Water  
614-644-2032

**Wilson, Rick**

---

**From:** Exemption 6 <Exemption 6>  
**Sent:** Wednesday, October 26, 2016 10:48 AM  
**To:** Wilson, Rick

Rick

I'm heading your way tomorrow with my records, what would be a good time. I think its a bout a 2 hour drive, I can leave no sooner than 10 am.

Exemption 6

## Wilson, Rick

---

**From:** Wilson, Rick  
**Sent:** Wednesday, November 16, 2016 12:22 PM  
**To:** Schroeder, John  
**Cc:** Exemption 6 Dairy; Exemption 6  
**Subject:** RE: Exemption 6 Dairy

John:

The contact information as requested is as follows:

Exemption 6, Exemption 6 Land Company, LLC

Cell: Exemption 6

Exemption 6 and the dairy's email are included (as cc'd Exemption 6 is likely expecting your call (as I accidentally dialed his number as I was looking it up).

Have a great day!  
~rick

---

**From:** Schroeder, John  
**Sent:** Wednesday, November 16, 2016 12:10 PM  
**To:** Wilson, Rick <Rick.Wilson@epa.ohio.gov>  
**Subject:** Exemption 6 Dairy

Rick,  
Would you by any chance have the contact info with the owner of Exemption 6 dairy.

Thanks,

John



## Wilson, Rick

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**From:** Wilson, Rick  
**Sent:** Tuesday, November 15, 2016 12:06 PM  
**To:** Peelle, Darla  
**Subject:** RE: PRR CO-1017-16 [Exemption 6] Land Company, LLE [Exemption 6] Exemption 6 Dairy

Nov 23, Nov. 28 (p.m.), Nov. 29, Dec 1, 2, 5, 6, 7, 8, 9...

---

**From:** Peelle, Darla  
**Sent:** Tuesday, November 15, 2016 11:39 AM  
**To:** Wilson, Rick <Rick.Wilson@epa.ohio.gov>  
**Subject:** RE: PRR CO-1017-16 [Exemption 6] Land Company, LLE [Exemption 6] Exemption 6 Dairy

Or, perhaps you're interested in setting it up and letting me know when? My calendar is up to date.

*Darla*

Darla L. Peelle  
Ohio EPA | Public Involvement Coordinator  
Northwest and Southwest District Offices  
Phone: (614) 644-2160  
Fax: (614) 644-3727  
[www.epa.ohio.gov](http://www.epa.ohio.gov)



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**From:** Wilson, Rick  
**Sent:** Tuesday, November 15, 2016 9:52 AM  
**To:** Boudier, Richard <[richard.boudier@epa.ohio.gov](mailto:richard.boudier@epa.ohio.gov)>; Peelle, Darla <[darla.peelle@epa.ohio.gov](mailto:darla.peelle@epa.ohio.gov)>; Reeder, Larry <[Larry.Reeder@epa.ohio.gov](mailto:Larry.Reeder@epa.ohio.gov)>  
**Cc:** Lee, Kim <[Kim.Lee@epa.ohio.gov](mailto:Kim.Lee@epa.ohio.gov)>  
**Subject:** FW: PRR CO-1017-16 [Exemption 6] Land Company, LLE [Exemption 6] Exemption 6 Dairy

Rich:

Does this (↓below↓) have to do with the attached e-mail thread/response from you October 31?

Keep in mind Rich that we are presently investigating/responding to a Verified Complaint ([Exemption 6] [Exemption 6]), and will also be scheduling a meeting with them in the very near future.

**Darla: We should schedule this meeting.**

**Kim: We will let you know when or if you need to proceed further on this.**

Thanks.  
~rick

---

**From:** Lee, Kim  
**Sent:** Tuesday, November 15, 2016 9:42 AM  
**To:** Wilson, Rick <Rick.Wilson@epa.ohio.gov>  
**Subject:** FW: PRR CO-1017-16 [Exemption 6] Land Company, LLE [Exemption 6] Dairy

Here you go, Rick. Can you either let me know what was sent so I can update the database or provide me with the documentation so the Rich can send it to her? Thank you so much.

Kim M. Lee  
Ohio EPA, Division of Surface Water  
Lazarus Government Center  
50 W. Town Street, Suite 700  
Columbus, OH 43215  
614-644-2001 Phone  
[kim.lee@epa.ohio.gov](mailto:kim.lee@epa.ohio.gov)



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**From:** Fowler, Kevin  
**Sent:** Monday, October 24, 2016 3:59 PM  
**To:** Peterson, Katrina <katrina.peterson@epa.ohio.gov>; Stump, Mark <Mark.Stump@epa.ohio.gov>  
**Cc:** Lee, Kim <Kim.Lee@epa.ohio.gov>; Hall, Brian <brian.hall@epa.ohio.gov>  
**Subject:** PRR CO-1017-16

<u>213918</u>	Surface Water Programs	NPDES Number (Federal)	OH0135925
<u>213917</u>	Surface Water Programs	NPDES Number (State)	2IK00023

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**Feed:** Public Records Requests RSS Feed  
**Posted on:** Thursday, October 20, 2016 11:47 AM  
**Author:**  
**Subject:** Central Office

**Location Tracking Number:** CO-1017-16

**Date Received:** 10/17/2016

**Requestor Name:**

[Exemption 6]

**Requestor\_address:**

[Exemption 6]

Cygnat, OH 43413

**Requestor\_Email:** [Exemption 6]

**Facility\_name:**

[Exemption 6] Land Company, LLC

Exemption 6 Dairy

**Facility\_County:**

Wood County

**Facility\_TimeFrame1:** 1/1/1972

**Facility\_TimeFrame2:** 10/17/2016

**Facility\_records\_type:** Enter Choice #1

**Coordinator\_Comments:**

Sent to DSW

\*\* Please read request for specifics \*\*

**Due\_Date:** 10/24/2016

**Copy\_Documents:** None Selected

**Status:** 2. Request Approved/Search for Files

**POC\_DSW:** Yes

**POC\_DAPC:** No

**POC\_DSIWM:** No

**POC\_GW:** No

**POC\_DW:** No

**POC\_DERR:** No

**POC\_OCAPP:** No

**POC\_DHWM:** No

**Legal\_Review:** None Selected

**InHouse\_Copies:** No

**InHouse\_Number\_Copies:** 0

**Invoice\_Sent:** Yes

**Agency Tracking ID:** Central Office-CO-1017-16

**Attachments:** <https://epaportal.sp.ohio.gov/support/dirnet/PRR/Lists/PRR/Attachments/11586/10-17-2016>

Exemption 6 Land Co - Exemption 6 Dairy - Exemption 6 Dairy.pdf

[View article...](#)

## Wilson, Rick

---

**From:** Wilson, Rick  
**Sent:** Thursday, November 10, 2016 1:55 PM  
**To:** Exemption 6  
**Subject:** RE:

Good. Thanks.

If possible please forward a descriptive photo of the completed work.

We will find time in the near future to verify on-site.

At this time, since the permit is expired and we have no renewal application. You can hold off on making a formal request until I hear differently.

~rick

**Rick Wilson, Environmental Specialist**  
Ohio EPA | Division of Surface Water  
Surface Water Improvement and Nonpoint Source-§319 program  
P.O. Box 1049, Columbus, OH 43216-1049  
Ph: 614-644-2032  
Fax: 614-644-2745  
[rick.wilson@epa.ohio.gov](mailto:rick.wilson@epa.ohio.gov)



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**From:** Exemption 6 [mailto:Exemption 6]  
**Sent:** Thursday, November 10, 2016 1:01 PM  
**To:** Wilson, Rick <Rick.Wilson@epa.ohio.gov>  
**Subject:**

Rick

The excavator is done. All run-off is sloped to the concrete lagoon.  
After your guy has a look do I then formally request to have you rescind the permit?

Exemption 6

**Wilson, Rick**

---

**From:** Boudier, Richard  
**Sent:** Monday, October 31, 2016 11:43 AM  
**To:** Peelle, Darla; **Exemption 6**  
**Cc:** Wilson, Rick; EPA Web Requests  
**Subject:** RE: Follow-up Complaint re: **Exemption 6** Land Company

Good morning **Exemption 6**,

I checked with the Division of Surface Water and we do not have any records in response to your request below for up-to-date soil sample/manure analyses documents.

Please let me know if you need any additional information.

Thank you,

Richard Boudier  
Public Records Manager  
Ohio Environmental Protection Agency  
Office of the Director  
Lazarus Government Center  
P.O. Box 1049  
Columbus, Ohio 43216-1049  
(614) 644-2782  
[richard.boudier@epa.ohio.gov](mailto:richard.boudier@epa.ohio.gov)

---

**From:** Peelle, Darla  
**Sent:** Friday, October 28, 2016 9:50 AM  
**Exemption 6**  
**Cc:** Wilson, Rick <Rick.Wilson@epa.ohio.gov>; EPA Web Requests <web.requests@epa.ohio.gov>; Tebbe, Patricia <patricia.tebbe@epa.ohio.gov>; Boudier, Richard <richard.boudier@epa.ohio.gov>  
**Subject:** RE: Follow-up Complaint re: **Exemption 6** Land Company  
**Importance:** High

Good morning, **Exemption 6**—

Thank you for letting us know about **Exemption 6** experience. I tried to reach him this morning, but my call went to voicemail, so I left a message that included an apology and my contact information. I'm sorry **Exemption 6** felt his concerns were dismissed. I don't know who he may have spoken with, but to the best of my knowledge it wasn't the Public Interest Center where I work, and Pat Tebbe also let me know that she didn't receive a call from him.

I have forwarded **Exemption 6** complaint to Rick Wilson in the Division of Surface Water in Ohio EPA's Central Office, here in Columbus. As you know, most CAFO issues are regulated by the Ohio Department of Agriculture, but Rick is still Ohio EPA's contact for those concerns under our authority.

Please keep in mind that I am always available as Ohio EPA's point of contact for northwest Ohio and I'm happy to provide assistance at any time. I'll be sure to let **Exemption 6** know this when he returns my call. If I can provide further assistance, please don't hesitate to contact me directly.

Best regards,

Darla

Darla L. Peelle

Ohio EPA | Public Involvement Coordinator

Northwest and Southwest District Offices

Phone: (614) 644-2160

Fax: (614) 644-3727

[www.epa.ohio.gov](http://www.epa.ohio.gov)



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**From:** [Redacted] [mailto:[Exemption 6](mailto:Exemption 6)]  
**Sent:** Thursday, October 27, 2016 8:44 PM  
**To:** EPA Web Requests <[web.requests@epa.ohio.gov](mailto:web.requests@epa.ohio.gov)>  
**Cc:** Tebbe, Patricia <[patricia.tebbe@epa.ohio.gov](mailto:patricia.tebbe@epa.ohio.gov)>; 'Batey, Benjamin' <[BBatey@co.wood.oh.us](mailto:BBatey@co.wood.oh.us)>  
**Subject:** Follow-up Complaint re: [Redacted] Land Company

To Whom It May Concern:

I just received a call from [Redacted], [Redacted], Weston, OH – [Redacted]. He said he tried to submit a complaint and/or a request an investigation yesterday into what he believed to be unlawful land applications of manure by the [Redacted] Land Company in Wood County. [Redacted] said they were applying manure sludge quite heavily last Wednesday the day before that area received over 1" of rain on Thursday. [Redacted] said he spoke with Ohio EPA employees, but did not receive a definitive answer and felt like his concerns were dismissed.

- Would someone please investigate [Redacted] complaint? You can reach him at the phone number above if there is no record of his call.

Please see the attached 2012 Ohio EPA Inspection Report for the [Redacted] Dairy – now the [Redacted] Land Company. This Report specifically states on page 3 that no manure was supposed to be applied unless up-to-date soil samples and manure analyses are obtained. I regularly submit requests for the [Redacted] Dairy/Dairy Acquisition 1 [Redacted] Dairy [Redacted] Land Company public records, however, I don't believe I have ever received copies of up-to-date soil samples or manure analyses. I also have a copy of a December 2015 Director's Final Findings and Orders that "noted the lack of a Manure Management Plan ("MMP") for the Facility, as required by the NPDES permit."

- Would someone please investigate IF [Redacted] has submitted up-to-date soil and samples or manure analyses. If so, would you please send me copies under Ohio's Public Records Laws?
- Would someone also investigate how this NPDES-permitted CAFO can operate without a valid Manure Management Plan as required by the NPDES permit?

I appreciate your assistance with my concerns.

Respectfully,

[Redacted]  
[Redacted]  
Cygnet, OH 43413



Exemption 6  
Exemption 6

## Wilson, Rick

---

**From:** Wilson, Rick  
**Sent:** Thursday, October 27, 2016 12:44 PM  
**To:** Exemption 6  
**Subject:** Re:

Can park on street w credit card.

On Oct 27, 2016, at 12:43 PM, Exemption 6 <Exemption 6> wrote:

I'm here, just trying to find parking, give me 15 min

## Wilson, Rick

---

**Subject:** [Exemption 6] Land Company, LLC  
**Location:** EPA DSW\_A\_CONF  
  
**Start:** Thu 10/27/2016 12:30 PM  
**End:** Thu 10/27/2016 2:00 PM  
**Show Time As:** Tentative  
  
**Recurrence:** (none)  
  
**Meeting Status:** Not yet responded  
  
**Organizer:** Wilson, Rick  
**Required Attendees:** Wilson, Rick; [Exemption 6]; [Exemption 6] Dairy  
**Resources:** EPA DSW\_A\_CONF

I have set up a room for 12:30 but we have wiggle room either way (in case you need to get lunch).

Call me (Cell 614-562-1961 or desk 614-644-2032) when you are close and I can advise you on parking and meet you downstairs to get you through security.

**Rick Wilson, Environmental Specialist**  
**Ohio EPA | Division of Surface Water**  
**Surface Water Improvement and Nonpoint Source-§319 program**

50 West Town Street, Suite 700  
P.O. Box 1049, Columbus, OH 43216-1049  
Ph: 614-644-2032  
Fax: 614-644-2745  
[rick.wilson@epa.ohio.gov](mailto:rick.wilson@epa.ohio.gov)



## Wilson, Rick

---

**From:** Wilson, Rick  
**Sent:** Wednesday, October 26, 2016 11:41 AM  
**To:** Exemption 6  
**Subject:** RE: FW:

Tomorrow is fine. Sorry. I misread your initial e-mail.

**From:** Exemption 6 [mailto:Exemption 6]  
**Sent:** Wednesday, October 26, 2016 11:40 AM  
**To:** Wilson, Rick <Rick.Wilson@epa.ohio.gov>  
**Subject:** Re: FW:

I can't get there today, does tomorrow work at all

On Oct 26, 2016 11:11 AM, "Rick.Wilson@epa.ohio.gov" <Rick.Wilson@epa.ohio.gov> wrote:

I will be available this afternoon. Call me when you are close, so I can meet you ...and get you signed in through our security desk.

614-562-1961 (cell)

614-644-2032 (desk)

**From:** Exemption 6 [mailto:Exemption 6]  
**Sent:** Wednesday, October 26, 2016 10:48 AM  
**To:** Wilson, Rick <Rick.Wilson@epa.ohio.gov>  
**Subject:**

Rick

I'm heading your way tomorrow with my records, what would be a good time. I think its a bout a 2 hour drive, I can leave no sooner than 10 am.

Exemption 6

## Wilson, Rick

---

**From:** Wilson, Rick  
**Sent:** Wednesday, October 26, 2016 11:15 AM  
**To:** Exemption 6; Exemption 6 Dairy  
**Subject:** FW:

Exemption 6:

Please be sure to bring (or e-mail scans) manure application records (including forecast) from sand-manure application done October 18 and/or 19<sup>th</sup>. You may be aware that there was a complaint in that regard and it was investigated by Wood County SWCD.

~rick

**From:** Exemption 6 [mailto:Exemption 6]  
**Sent:** Wednesday, October 26, 2016 10:48 AM  
**To:** Wilson, Rick <Rick.Wilson@epa.ohio.gov>  
**Subject:**

Rick

I'm heading your way tomorrow with my records, what would be a good time. I think its a bout a 2 hour drive, I can leave no sooner than 10 am.

Exemption 6

## Wilson, Rick

---

**From:** Wilson, Rick  
**Sent:** Wednesday, October 26, 2016 11:09 AM  
**To:** Lane, Matthew  
**Subject:** RE: Spill 2060-0-Wood County NPDES permitted **Exemption 6** Dairy.

Good morning Matt:

Based on a phone call I just received from the complainant, I learned the following:

This complaint below was associated with **Exemption 6** Land Company, LLC which is a dairy – with a CAFO permit.

**I would like to see the forecast. If Wood County SCWD has it.** I will also be asking the permittee for records on this land application event.

I'd like to discuss this dairy and some of the background goings-on with you and Wood SWCD. Please let me know when we can do that at your earliest convenience.

Thanks Matt.  
~rick

---

**From:** Wilson, Rick  
**Sent:** Monday, October 24, 2016 8:35 AM  
**To:** Taylor, Todd <Todd.Taylor@epa.ohio.gov>  
**Subject:** FW: Spill 2060-0

In case you track these. Below is the ODA response ...

---

**From:** Lane, Matthew  
**Sent:** Friday, October 21, 2016 4:42 PM  
**To:** Wilson, Rick <[Rick.Wilson@epa.ohio.gov](mailto:Rick.Wilson@epa.ohio.gov)>  
**Subject:** RE: Spill 2060-0

Wood SWCD investigated. Some manure was applied to < 5ac. There was >1" of rain overnight 10/19-20, but there was not a >50% of >0.5" of precip. in the forecast. According to investigation:

Operation is in compliance with all regulations regarding manure application. This field is highly unlikely to discharge any pollutants under current conditions. The operator is well-versed in the BMPs that minimize risk of manure runoff.

Thanks for forwarding the complaint.

---

**From:** Wilson, Rick  
**Sent:** Friday, October 21, 2016 11:49 AM  
**To:** Lane, Matthew; Ety, Andrew  
**Subject:** Fwd: Spill 2060-0

FYI.

Begin forwarded message:



**From:** EPA ERFAX ER <erfax.er@epa.ohio.gov>

**Date:** October 21, 2016 at 10:48:14 AM EDT

**To:** "Wilson, Rick" <Rick.Wilson@epa.ohio.gov>, EPA ERFAX ER <erfax.er@epa.ohio.gov>

**Subject: Fw: Spill 2060-0**

*Attached is a courtesy copy of an incident report that may interest your program. This communication is informational. This is not a referral nor is it a request for SME support.*

*The Duty Officer will distribute a red email to Program and District Chiefs if the incident meets ER's red email criteria and ER actually responds to the scene.*

DO Taylor

614-644-3199

Duty Officer

Ohio Environmental Protection Agency

Division of Environmental Response, Investigation and Enforcement

24 Hour Hotline 800-282-9378

---

**From:** spills@epa.ohio.gov <spills@epa.ohio.gov>

**Sent:** Friday, October 21, 2016 08:48

**To:** EPA ERFAX ER

**Subject:** Spill 2060-0

## **Spill #2060-0**

<b>Resp Party</b>	Exemption 6 APPLE FARM
<b>Product</b>	MANURE
<b>Amount</b>	UNK
<b>County</b>	WOOD
<b>City/Twp</b>	Exemption 6 TWP
<b>Location</b>	Exemption 6
<b>District</b>	NW
<b>Reported By</b>	ANONYMOUS
<b>Title</b>	
<b>Telephone</b>	
<b>Affiliation</b>	CIT
<b>Reported Date</b>	21-OCT-16 08:43
<b>Discovered Date</b>	19-OCT-16 12:00
<b>Occured</b>	:
<b>Complaint</b>	Y

<b>Did Spiller Report</b>	N
<b>Waterway</b>	N/A
<b>Media 1</b>	LAND OR LAND SURFACE IMPACT
<b>Media 2</b>	N/A
<b>Media 3</b>	N/A
<b>Cause</b>	N/A
<b>Reason</b>	N/A
<b>Other Agency Notified</b>	N/A
<b>Received By</b>	TAYLOR, TODD
<b>Remarks</b>	ANONYMOUS COMPLAINT OF FARMER APPLYING MANURE TO FIELD ON WEDNESDAY AND ON THURSDAY THE FIELD RECEIVED ABOUT AN INCH O. RAIN. ANONYMOUS IS CONCERNED ABOUT RUNOFF ISSUES.

**Wilson, Rick**

---

**From:** Wilson, Rick  
**Sent:** Wednesday, October 19, 2016 3:09 PM  
**To:** Exemption 6  
**Subject:** Re: August 31, 2016 Inspection Follow-up

I can do either....accept copies or inspect records and then return to you.

Yes. Office is in downtown Columbus, OH.  
50 W. Town St., Suite 700

---

**From:** Exemption 6 <Exemption 6>  
**Sent:** Wednesday, October 19, 2016 3:06:47 PM  
**To:** Wilson, Rick  
**Subject:** RE: August 31, 2016 Inspection Follow-up

Ok  
It's a large amount of paper, do you want copies or do want to inspect and then return to me?  
Where is your office, Columbus?

Exemption 6

---

**From:** Rick.Wilson@epa.ohio.gov [mailto:Rick.Wilson@epa.ohio.gov]  
**Sent:** Wednesday, October 19, 2016 11:57 AM  
**To:** Exemption 6  
**Subject:** Re: August 31, 2016 Inspection Follow-up

Thank you. We need to know that since my visit you have reviewed your permit, and are managing manure properly and keeping records demonstrating manure application events and facility inspections are following the permit accordingly.

You can mail records to me, or scan and e-mail, or hand deliver—whatever works for you.

If you need, I can talk with you or your and your consultant about the MMP development need.

I can be reached at 614-644-2032 or cell 614-562-1961 if you need to discuss anything or arrange meeting.

Thanks for getting back with me.  
~rick

---

**From:** Exemption 6 <Exemption 6>  
**Sent:** Wednesday, October 19, 2016 2:15:08 PM  
**To:** Wilson, Rick  
**Subject:** RE: August 31, 2016 Inspection Follow-up

Rick

I can get you all our application records, inspections etc. next week, I will be in Ohio and can gather them up and hand deliver to your office or mail them when I get there.  
I will also have the estimated volume of the runoff as well as a schematic of the proposed diversion to the concrete pit.

**From:** Rick.Wilson@epa.ohio.gov [mailto:Rick.Wilson@epa.ohio.gov]  
**Sent:** Tuesday, October 18, 2016 8:20 AM  
**To:** Exemption 6  
**Subject:** RE: August 31, 2016 Inspection Follow-up

**Exemption 6**

It is very important that you develop and follow an up-to-date MMP according to the terms and conditions of the NPDES permit as soon as possible. As mentioned below this includes but is not limited to: current herd size, facility conditions, and available systems and land for manure application.

Per Item II(J) of your NPDES permit

**J. Manure Management Plans**

With the exception of Insect and Rodent Control Plans, the Manure Management Plan (MMP) included within the Permit-to-Operate issued by the Ohio Department of Agriculture on July 19, 2007, reviewed, and approved by the Director through issuance of this NPDES permit is incorporated as a condition of this NPDES permit.

**1. SIGNATURE AND PLAN REVIEW**

- a. The plan shall be retained onsite at the CAFO.
- b. The Director may notify the permittee at any time that the plan does not meet one or more of the minimum requirements of this permit. Within 30 days of such notification from the Director, the permittee shall make the required changes to the plan and shall submit to the Director a revised plan demonstrating that the requested changes have been made.

**2. KEEPING PLANS CURRENT**

The permittee shall amend the plan prior to a change in design, construction, operation, or maintenance, which has an effect on the potential for the discharge of pollutants to the surface waters of the State or if the MMP proves to be ineffective in eliminating or minimizing pollutants from sources identified under Part I, A, 3, or otherwise achieving the general objectives of minimizing pollutant discharges associated with the CAFO.

When a permittee proposes to make changes to the MMP previously submitted to and approved by the Director, the permittee shall provide the Director with the most current version of the MMP and identify changes from the previous version in a cover letter prior to implementation of the changes. The results of calculations made in accordance with Part II, J, 4 are not subject to this notification requirement.

The Director will review the revised MMP to ensure that it meets the requirements of this permit and will determine whether the changes to the MMP necessitate revision to the terms of the MMP incorporated into this permit. If no revision is necessary, the Director will notify the permittee and upon such notification the permittee shall implement the revised plan. If revision to the terms of the MMP is necessary, the Director will follow the applicable modification process in 40 CFR Part 122.42(c)(6)(A) to revise the terms of the MMP incorporated into this permit. Modified MMP submittals with substantial changes are subject to a 30-day public notification period on the Ohio EPA website.

Examples of substantial changes to a MMP requiring a permit modification include, but are not limited to:

- a. Addition of new land application areas not previously included in the MMP;
- b. Any changes to the field-specific maximum annual rates for land application and to the maximum amounts of nitrogen and phosphorus derived from all sources for each crop;
- c. Addition of any crop or other uses not included in the MMP and corresponding field-specific rates of application; and
- d. Changes to site-specific components of the MMP, where such changes are likely to increase the risk of nitrogen and phosphorus transport to waters of the State.

### 3. CONTENTS OF PLAN

The manure management plan shall address the form, source, amount, timing, agronomic rate, and method of application of nutrients to each field to achieve compliance with this permit, ensure appropriate agricultural utilization of the nutrients, and minimize movement of pollutants to surface waters. To the extent applicable, the MMP shall address the following:

- a. Storage of manure, management of mortalities, diversion of clean water, prevention of contact of animals with waters of the State, and proper chemical handling to ensure compliance with Part I, A, 1, Part II, and Part VII of this permit.
- b. Inspections, monitoring, and maintenance activities for structures and equipment involved in manure handling and storage in compliance with Part II and Part VII, Production Area Requirements of this permit.
- c. If applicable, a manure land application plan that will be implemented to comply with Part VII of this permit, including: 1) a total nutrient budget; 2) manure and soil characterizations; 3) application methods and timing that will minimize nutrient transport to waters of the State; and 4) field specific agronomic application rates.
- d. If applicable, a manure distribution and utilization plan including: 1) total nutrient budget; 2) manure characterization; and 3) manure removal methods and timing that will minimize nutrient transport to waters of the State.
- e. Site specific conservation practices to be implemented, including as appropriate buffers or equivalent practices, to control runoff of pollutants to waters of the State.

In my last e-mail correspondence to you, I provided a MMP update packet. This packet has some essential information including inspection and record keeping requirements, and form to aid in compliance. During the August 31 inspection, most required records were unavailable.

Please provide the following as soon as possible:

- As soon as possible, please forward me all records (including land application, manure storage, and facility inspections) kept to demonstrate compliance with your NPDES permit since my inspection on August 31, 2016.
- Please provide this office with an estimate of annual volume of production area runoff that will be directed to manure storage system (according to your most recent proposal).
- Please provide the September 15 manure storage evaluation record.
- Please provide this office with a schematic of the proposed production area runoff collection plan. (This needs to be reflected in the revisions to the MMP.)

You have an expired NPDES permit. However, the NPDES permit is active and enforceable. I have provided you with NPDES renewal forms. I have concerns with the timing (or absence of timelines) of the items (diversion of runoff to concrete lagoon and the MMP development) you described in your response.

Feel free to call with questions.

~rick

Rick Wilson, Environmental Specialist  
Ohio EPA | Division of Surface Water

**Surface Water Improvement and Nonpoint Source-§319 program**

P.O. Box 1049, Columbus, OH 43216-1049

Ph: 614-644-2032

Fax: 614-644-2745

[rick.wilson@epa.ohio.gov](mailto:rick.wilson@epa.ohio.gov)



---

**From:** Exemption 6 [mailto:Exemption 6]  
**Sent:** Tuesday, October 18, 2016 1:16 AM  
**To:** Wilson, Rick <[Rick.Wilson@epa.ohio.gov](mailto:Rick.Wilson@epa.ohio.gov)>  
**Subject:** RE: August 31, 2016 Inspection Follow-up

Rick

I've hired a contractor to divert any silage and or yard run off to the concrete lagoon.  
And I'm working with a consultant on getting a proper nutrient management plan in place.  
The contractor said the beginning of November, the nutrient management plan I'm not sure how long it will take, but I was hoping by mid to late November we should have one.  
I'm looking at the non-renewal of the permit.  
So after I get these two things done we can pass a re-inspection.

Exemption 6

---

**From:** [Rick.Wilson@epa.ohio.gov](mailto:Rick.Wilson@epa.ohio.gov) [mailto:[Rick.Wilson@epa.ohio.gov](mailto:Rick.Wilson@epa.ohio.gov)]  
**Sent:** Friday, September 16, 2016 8:21 AM  
**To:** Exemption 6  
**Cc:** [Daniel.Bruner@agri.ohio.gov](mailto:Daniel.Bruner@agri.ohio.gov)  
**Subject:** August 31, 2016 Inspection Follow-up

Exemption 6:

Following up:

As described during the August 31, 2016 inspection, I am providing you with the NPDES MMP Update Packet that provides references and forms that can help you to meet the terms and conditions of your expired (yet still enforceable) NPDES permit.

I am also attaching a pdf of the correct NPDES permit (The one I shared with you was downloaded from the wrong location...and likewise did not have the correct name on the cover.). This permit transfer was processed on September 9, 2014 with effective date of the August 26, 2014 (the date the transfer paperwork was signed between You and Exemption 6).

As mentioned during the inspection, it was apparent that contaminated production area runoff (from feed storage area) is not contained. Past issues with un-contained production area runoff and discharges of manure to waters of the state are part of the reason this facility is currently regulated as a Medium CAFO by Ohio EPA.

Because your permit is expired, it is important you resolve of renewal (or non-renewal) procedures.



↓At this link↓: you can download and complete the necessary renewal NPDES Applications which will allow for renewal of the Exemption B Land Company LLC permit.

<http://epa.ohio.gov/dsw/cafo/index.aspx#126567136-how-to-apply-for-a-cafo-permit>

To renew the NPDES permit the following must be provided to this office:

- Form 1
- Form 2B
- Antidegradation Addendum
- Updated Manure Management Plan (per current herd size, facility conditions, and available systems and land for manure application).
- Administrative processing Fee of \$200 Check payable to "Treasurer, State of Ohio"

If Medium CAFOs can demonstrate that they no longer have discharges to waters of the state from their production area; and the facility has an up-to-date manure management plan (and is following it), then a reevaluation can be done with respect to Ohio EPA permitting authority for NPDES CAFO permit. This reevaluation would allow this office to determine if a NPDES permit is still required, or if the permit can be taken off-the-books through the No-Permit-Required (NPR) process.

Please do not hesitate to call with question comments or concerns

~rick

Rick Wilson, Environmental Specialist

Ohio EPA-Division of Surface Water

614-644-2032

## Wilson, Rick

---

**From:** Wilson, Rick  
**Sent:** Tuesday, October 18, 2016 8:35 AM  
**To:** Wilson, Rick  
**Subject:** FW: Concerned citizen letter regarding Wood County Dairy-Exemption 6

---

**From:** Wilson, Rick  
**Sent:** Friday, July 29, 2016 10:18 AM  
**To:** Sherer, Erin <Erin.Sherer@epa.ohio.gov>  
**Cc:** Alexander, Cathy <cathy.alexander@epa.ohio.gov>  
**Subject:** Concerned citizen letter regarding Wood County Dairy

Erin:

We can discuss further when you have time.

I'm cc'ing Cathy in the hope that she might have a few minutes to contribute to the discussion

### Enumerated concerns as listed in the letter to Cathy dated June 28, 2016:

- 1) No valid MMP; and
- 2) According to OEPA Orders (8-29-12) "no manure should be applied to any fields unless up-to-date soil samples and manure analyses are obtained." **Is anyone from Ohio EPA monitoring this operation to make sure they are not applying manure?**
  - a. We currently do not have a regulatory "hook" to make the folks at this facility apply for NPDES permit, nor can we require an MMP. Permit for Exemption 6 Dairy is expired (2-28-15). This facility does not have an ODA-DLEP PTO. Due to herd size below regulatory threshold. According to ODA-DLEP Andy Ety, replacement heifer may be stocked there currently (not certain though).
  - b. **(for discussion)** It may be worthwhile doing a joint inspection with ODA to determine:
    - i. Who are the current owners/operators?
    - ii. Do they have a CNMP for the manure they generate or that was left on-site?
    - iii. What is the current herd size/type on the site.?
    - iv. Manure management methods and locations. Are their methods agronomically and environmentally sound?
    - v. Are records being kept?
    - vi. Is there any risk of discharge or impact on water quality?
- 3) Closure Violations-facility not properly closed and manure generated before closure remains in the manure storage ponds. Concerned that closure requirements were ignored.
  - a. See Item 5 below.

- 4) Water Well Testing. Would Ohio EPA investigate and take required corrective actions to determine if the dairy has contaminated nearby wells and, if so, remediate this situation?
- Not without demonstrated cause. Citizens who are concerned can collect samples and have tests run on their well-water. If a pattern of contamination problems exists, Ohio EPA's Division of Drinking and Ground Water has authority to react and work toward fixing those problems.
- 5) Permit expired Feb. 2015. How could this permit expire since all the manure that was generated before Exemption 6 Dairy was closed was never properly disposed of and the manure storage facility was never properly closed?
- According to expired permit: Page 20, Operation/Management Practices-Item N.  
"In the event that this facility is closed for production purposes or is no longer a CAFO, this permit shall remain effective until the permittee demonstrates to the satisfaction of the Director that there is no remaining potential for a discharge of manure that was generated while the operation was a CAFO, other than agricultural storm water from land application areas. All manure shall be properly disposed of, and in the case of facility closure, the manure storage or treatment facilities shall be properly closed."
  - The item above does not reference O&M requirements after a permit expires and/or where the herd is removed from the facility. *(Should talk with Cathy A and ODA-DLEP about on resolving this issue).*
- 6) Has Exemption 6 paid his civil penalty?
- Yes or No?
- 7) Has Ohio EPA allowed CAFOs to incorporate ODA MMPs in the other 42 approved NPDES permits and if so, how do you justify this in light of Ms. Harris' clear directive?
- The Ohio EPA CAFO program developed a suggested MMP update packet that if combined with ODA plans would satisfy the additional or varied NPDES permit requirements (not covered by ODA Mmanagement plans) There are many instances where these were added to complete the manure management plan and to satisfy the Ohio EPA permits. *This MMP update packet can be provided.*
- 8) Please explain how Ohio EPA can incorporate ODA-MMPs that utilize D&U in federal NPDES Permits that require site-specific MMPs.
- The NPDES permit allowed for D&U to be part of the plan. Item 3.d. on Page 18 of the expired permit reads as follows:
    - Contents of Plan: If applicable, a manure distribution and utilization plan including: 1) total nutrient budget; 2) manure characterization; and 3)manure removal methods and timing that will minimize transport to waters of the state.
- 9) Have other Ohio EPA NPDES Permits had problems similar to attached detailed listing of the Exemption 6 Dairy?
- No.

- 10) Has Ohio EPA transferred NPDES Permits to other owners/operators without valid MMPs?
- a. No. And not in this case either.

**Wilson, Rick**

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**From:** Wilson, Rick  
**Sent:** Friday, September 30, 2016 11:03 AM  
**To:** Peelle, Darla  
**Subject:** FW: Permitting Assistance Question  
**Attachments:** 2IK00023.pdf

This is the reference in the permit (attached) that give maximum herd size

Page 16  
2IK00023\*BD

## Part II, OTHER REQUIREMENTS

A. This NPDES permit applies to the storage, collection, treatment, handling, and disposal/land application of manure, management of storm water associated with industrial activity, and discharge of water treatment back flush water associated with **Exemption 6** Dairy LLC, which is currently designed to confine a maximum of **Exemption 6** mature dairy cattle. The dairy has been approved by the Ohio Department of Agriculture to expand to a maximum of **Exemption 6** mature dairy cattle. This operation shall not be expanded above **Exemption 6** cows, or to encompass more land to be included in the production area, until Ohio EPA has been notified in writing of the intended actions. A modified NPDES permit (and updated Manure Management Plan) reflecting the expansion will be required for significant changes (e.g., greater than 10 percent increase in animals confined). For Manure Management Plan changes, see Part II, J.

allowed... **Exemption 6**

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**From:** Wilson, Rick  
**Sent:** Friday, September 30, 2016 10:26 AM  
**To:** Peelle, Darla <darla.peelle@epa.ohio.gov>  
**Subject:** RE: Permitting Assistance Question

As discussed

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**From:** Peelle, Darla  
**Sent:** Friday, September 30, 2016 9:00 AM  
**To:** Wilson, Rick <Rick.Wilson@epa.ohio.gov>  
**Cc:** Gibson, Russell <Russell.Gibson@epa.ohio.gov>  
**Subject:** FW: Permitting Assistance Question

Good morning, Rick –

We received an inquiry from **Exemption 6** with whom I believe you are well acquainted, about a CAFO in northwest Ohio. Initially, I recommended she contact Ag, but she followed up with information regarding the limited size of the operation and a link to an NPDES permit they hold. Would you mind looking into **Exemption 6** request? You can contact her directly, or I'd be happy to contact her on your behalf.

Thank you for any assistance you can provide.

Regards,

Darla

Darla L. Peelle  
Ohio EPA | Public Involvement Coordinator  
Northwest and Southwest District Offices  
Phone: (614) 644-2160  
Fax: (614) 644-3727  
[www.epa.ohio.gov](http://www.epa.ohio.gov)



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**From:** Exemption 6 - Gmail [mailto:Exemption 6]  
**Sent:** Thursday, September 29, 2016 10:11 PM  
**To:** Peelle, Darla <[darla.peelle@epa.ohio.gov](mailto:darla.peelle@epa.ohio.gov)>  
**Cc:** EPA Web Requests <[web.requests@epa.ohio.gov](mailto:web.requests@epa.ohio.gov)>  
**Subject:** RE: Permitting Assistance Question

Hi Darla,

Thanks for your reply. Sorry for the confusion – all four of those names are for the same dairy. The NPDES Permit has been transferred several times.

The ODA permit for this dairy expired four years ago because this Exemption 6 -head dairy never expanded to Exemption 6 cows - but they had a discharge in 2004. The Ohio EPA incorporated the ODA MMP in the NPDES Permit. I've submitted a public records request to Ohio EPA for a copy of the NMP/MMP and was told there were no records responsive to my request.

As I reviewed the NPDES Permit on the Ohio EPA website <http://www.epa.ohio.gov/dsw/cafo/index.aspx#126567134-cafo-npdes-permits-in-ohio> – I found no animal numbers. In fact, the NPDES Permit shows "Exemption 6 Dairy" on the front – even though it was supposedly transferred to Exemption 6 Land Company two years ago.

We're doing a study of CAFOs in the western Lake Erie basin and need to know how many cows this dairy is permitted to house. If possible, could you scan and email me this data?

Thanks so much for your help with my request – and have a great week-end!

Exemption 6

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**From:** [darla.peelle@epa.ohio.gov](mailto:darla.peelle@epa.ohio.gov) [mailto:[darla.peelle@epa.ohio.gov](mailto:darla.peelle@epa.ohio.gov)]  
**Sent:** Thursday, September 29, 2016 11:41 AM  
**To:** Exemption 6  
**Cc:** [web.requests@epa.ohio.gov](mailto:web.requests@epa.ohio.gov)  
**Subject:** RE: Permitting Assistance Question

Hello Exemption 6,

Your question about the number of cows permitted at the four dairies you listed was forwarded to me for a response. We've interacted a number of times in the past, so I won't trouble you with formal introductions here.

The Ohio Department of Agriculture has permitting authority over those operations. I recommend contacting n their Livestock Environmental Permitting Division. Their email address is [lepp@agri.ohio.gov](mailto:lepp@agri.ohio.gov) and their phone



number is (800) 282-1955. You may also choose to contact a public information officer Brett Gates directly. His email address is [bgates@agri.ohio.gov](mailto:bgates@agri.ohio.gov) and his phone number is (614) 752-9712.

Please feel free to contact me directly if I can provide further assistance, Exemption 6. I'm happy to oblige.

Regards,

*Darla*

Darla L. Peelle  
Ohio EPA | Public Involvement Coordinator  
Northwest and Southwest District Offices  
Phone: (614) 644-2160  
Fax: (614) 644-3727  
[www.epa.ohio.gov](http://www.epa.ohio.gov)



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**From:** EPA Web Requests  
**Sent:** Thursday, September 29, 2016 8:52 AM  
**To:** Peelle, Darla <[darla.peelle@epa.ohio.gov](mailto:darla.peelle@epa.ohio.gov)>  
**Subject:** Fw: Permitting Assistance Question

Please respond.

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**From:** Exemption 6 - Gmail Exemption 6  
**Sent:** Tuesday, September 27, 2016 3:52 PM  
**To:** EPA Web Requests  
**Subject:** Permitting Assistance Question

Hi,

Could you please tell me how many cows the Exemption 6 / Dairy Acquisition 1 / Exemption 6 / Exemption 6 Dairy is permitted for?

Thanks for your help,  
Exemption 6

Application No. OH0135925

Modification Issue Date: May 6, 2011

Modification Effective Date: July 1, 2011

Modification Expiration Date: February 28, 2015

Ohio Environmental Protection Agency  
Authorization to Discharge Under the  
National Pollutant Discharge Elimination System

In compliance with the provisions of the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251 et. seq., hereinafter referred to as the "Act"), and the Ohio Water Pollution Control Act (Ohio Revised Code Section 6111),

Exemption 6  
Land Company LLC

is authorized by the Ohio Environmental Protection Agency, hereinafter referred to as "Ohio EPA," to discharge water treatment back flush water and storm water associated with industrial activity from the Exemption 6 Land Company concentrated animal feeding operation located at Exemption 6, Weston, Ohio, Wood County and discharging to an unnamed tributary of West Branch of Tontogany Creek in accordance with the conditions specified in Parts I, II, III, and VII of this permit.

In accordance with the antidegradation rule, OAC 3745-1-05, I have determined that a lowering of water quality in the unnamed tributary of West Branch of Tontogany Creek for the discharge of water treatment back flush water is necessary. Provision (D)(1)(i) was applied to this application. This provision excludes the need for the submittal and subsequent review of technical alternatives and social and economic issues related to the degradation. Other rule provisions, however, including public participation and appropriate intergovernmental coordination were required and considered prior to reaching this decision.

This permit is conditioned upon payment of applicable fees as required by Section 3745.11 of the Ohio Revised Code.

This permit and the authorization to discharge shall expire at midnight on the expiration date shown above. In order to receive authorization to discharge beyond the above date of expiration, the permittee shall submit such information and forms as are required by the Ohio EPA no later than 180 days prior to the above date of expiration.

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Craig W. Butler  
Director

Total Pages: 58

Part I, A. - DAILY MAXIMUM DISCHARGE LIMITATIONS

1. CAFO PRODUCTION AREA

- a. Beginning on the effective date of this permit, there shall be no discharge of manure pollutants from the production area to waters of the State. The production area shall be properly designed, constructed, operated, and maintained to contain manure, direct precipitation, and the runoff from a 100-year, 24-hour storm event and the production area shall be operated in compliance with the additional measures and records required in Part II and Part VII.
- b. Dry weather discharges of manure are prohibited from production and land application areas.
- c. Storm water associated with industrial activity can be discharged in accordance with this permit as long as good housekeeping practices are conducted to ensure that the storm water is not contaminated by manure, animal feed, etc. Water treatment back flush water can be discharged in accordance with this permit. See Part I, B for monitoring requirements.
- d. Any spill, discharge, or overflow of pollutants from the production area to waters of the State shall not cause an exceedance of Ohio Water Quality Standards in the receiving water of the State.

e. If a spill, discharge or overflow of manure occurs at any time from the production area to waters of the State (a violation of Part I, A, 1, a), the permittee shall collect and analyze grab samples from each spill, discharge or overflow for the following list of parameters:

00310 - Biochemical Oxygen Demand, 5 Day (BOD5) - mg/l

00610 - Nitrogen, Ammonia (NH3) - mg/l

00665 - Phosphorus, Total (P) - mg/l

(Note: units of mg/l)

The permittee shall: (a) collect the sample within 30 minutes of the first knowledge of the spill, discharge, or overflow; or (b) if sampling in that period is inappropriate due to dangerous weather conditions, collect the sample as soon as possible after suitable conditions occur, and document the reason for delay.

The permittee shall notify Ohio EPA by calling 1-800-282-9378 as soon as possible but no later than 24 hours following the first knowledge of the spill, discharge, or overflow. Immediate notification allows Ohio EPA to assist in clean-up and remediation efforts and may reduce magnitude of environmental impact and extent of permit violations.

The permittee shall report the results of the spill, discharge, or overflow sample to Ohio EPA, Central Office, Division of Surface Water, within 14 days of occurrence. The report shall, at a minimum, contain the sample results of the aforementioned parameters, describe the reason for the spill, discharge, or overflow, the location, estimate of quantity and duration of the spill, discharge, or overflow, quantity and duration of the precipitation leading up to the event, as well as any measures taken to clean up and eliminate the spill, discharge, or overflow and prevent reoccurrence of the spill, discharge or overflow. See Part III, 12 and Part VII, Production Area Requirements.

Along with the report submittal, the permittee shall submit a revised permit application and Antidegradation Addendum that address the potential to discharge to waters of the State.

f. The permittee shall ensure removal and disposal of animal carcasses in a manner that prevents discharge of pollutants to waters of the State and ensure that carcasses are not disposed of in the manure storage or treatment facility unless the facility is designed specifically to treat the carcasses. Please note that mortality compost is included in the definition of manure in Part I, A, 4 of this permit, therefore all permit requirements pertaining to manure also include mortality compost.

g. Chemicals and other contaminants shall not be disposed of in the manure storage or treatment facility unless the facility is designed specifically to treat such chemicals and contaminants.

h. Animals stabled or confined at the facility shall not come into contact with surface waters of the State.

## 2. LAND APPLICATION ACTIVITIES

- a. There shall be no discharge of pollutants to waters of the State from manure stockpiles. See Part VII, B for stockpile setback restrictions.
- b. There shall be no discharge to waters of the State during the process of applying manure to land.
- c. There shall be no discharge of pollutants to waters of the State from land applied manure except for discharges that are composed of storm water runoff and/or snow melt runoff originating from a land area where manure from a CAFO has been applied in compliance with the manure management plan and this permit.
- d. The permittee shall notify Ohio EPA by calling 1-800-282-9378 as soon as possible but no later than 24 hours following the first knowledge of a spill or discharge of pollutants from land applied manure that is not composed of storm water runoff (e.g., tile discharge during dry weather), except as required by Part VII, B for land application on frozen and/or snow covered ground. Immediate notification allows Ohio EPA to assist in clean-up and remediation efforts and may reduce magnitude of environmental impact and extent of permit violations.

The permittee shall submit a written report of the event to Ohio EPA, Central Office, Division of Surface Water, within 14 days of the spill or discharge. The report shall, at a minimum, describe the reason for the spill or discharge, the location, estimate of quantity and duration of the spill or discharge, quantity and duration of the precipitation leading up to the event, land application records, as well as measures taken to clean up and eliminate the spill or discharge and prevent reoccurrence of the spill or discharge. See Part III, 12 and Part VII, Production Area Requirements.

### 3. LIST OF POLLUTANTS

For the purpose of Part III, 12, A, 4 of this permit, the following list of pollutants is established: Biochemical Oxygen Demand, 5 Day (BOD5); Nitrogen, Ammonia (NH3); Phosphorus, Total (P).

### 4. DEFINITIONS

**100-YEAR, 24-HOUR STORM EVENT:** means the maximum 24-hour precipitation event with a probable recurrence interval of once in 100 years (i.e., a storm event that has a 1% chance of happening in any given year) as defined by the National Weather Service in Technical Paper Number 40, "Rainfall Frequency Atlas of the United States", May 1961, and subsequent amendments, or equivalent regional or state rainfall probability information developed there from. Current information can be found in "Rainfall Frequency Atlas of the Midwest" (Bulletin 71, 1992, F.A. Huff and J.R. Angel, Midwestern Climate Center and the Illinois State Water Survey, Champaign, IL).

**ANIMAL FEEDING OPERATION (AFO):** is defined in 40 CFR 122.23(b)(1) as: "...a lot or facility (other than an aquatic animal production facility) where the following conditions are met: (i) Animals (other than aquatic animals) have been, are, or will be stabled or confined and fed or maintained for a total of 45 days or more in any 12-month period, and (ii) Crops, vegetation, forage growth, or post-harvest residues are not sustained in the normal growing season over any portion of the lot or facility".

**BEST MANAGEMENT PRACTICES (BMPs):** means schedules of activities, prohibitions of practice, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the United States. Best Management Practices also include treatment requirements, operating procedures, and practices to control site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

**CERTIFIED MANURE MANAGEMENT PLANNER:** means a technical service provider as defined by United States Department of Agriculture in 7 CFR Part 652.2 as "an individual, entity, or public agency either: (1) certified by NRCS and placed on the approved list to provide technical services to participants; or, (2) selected by the Department to assist in the implementation of conservation programs covered by this part through a procurement contract, contribution agreement or cooperative agreement with the Department."

**CHRONIC RAINFALL:** means a series of wet weather conditions that preclude manure removal from a properly designed, constructed, maintained, and operated manure storage or treatment facility, precludes land application of manure in accordance with this permit, and exceeds the documented and/or State approved chronic rainfall design storage value used in the design of the manure storage or treatment facility.

**CONCENTRATED ANIMAL FEEDING OPERATION (CAFO):** means an AFO that is defined as a large CAFO or as a medium CAFO, or that is designated as a CAFO by the Director or Regional Administrator. Two or more AFOs under common ownership are considered to be a single AFO for the purposes of determining the number of animals at an operation, if they adjoin each other or if they use a common area or system for the disposal of wastes.

**DISCHARGE:** means the addition of any pollutant or combination of pollutants to the waters of the State from a point source. This definition includes additions of pollutants into waters of the State from: surface water runoff which is collected or channeled by man; discharges through pipes, sewers, or other conveyances owned by a State, municipality, or other person which do not lead to a treatment works; and discharges through pipes, sewers, or other conveyances leading into privately owned treatment works.



**DRINKING WATER SOURCE PROTECTION AREA FOR A PUBLIC WATER SYSTEM USING GROUND WATER:** means the surface and subsurface area surrounding a public water supply well(s) which will provide water from an aquifer to the well(s) within five years as delineated or endorsed by the Director under Ohio's wellhead protection and source water assessment and protection programs.

**EMERGENCY MANAGEMENT ZONE (EMZ):** means the surface and subsurface area in the immediate vicinity of a public water system intake as delineated or endorsed by the Director under the source water assessment and protection program within which the public water supply owner/operator has little or no time to respond to potential contamination from a spill, release or weather related event. The standard emergency management zone boundary consists of a semi-circle that extends five hundred feet upstream of the intake and one hundred feet downstream of the intake, except as modified due to local conditions.

**FLOODPLAIN:** means the area adjoining any river, stream, watercourse or lake that has been or may be covered by floodwater.

**FORECAST:** means the daily "hour by hour" forecast as presented by The Weather Channel ([www.weather.com](http://www.weather.com)), or equivalent. More specifically, the forecast for the zip code that represents the land application area/site shall be printed/recorded up to, but not greater than 24-hours prior to each land application event at any site. The percent chance of rain listed under the hour by hour forecast shall be used to determine compliance with Part VII, B, 2 of this permit.

**FREEBOARD:** means the linear distance in feet from the top of the water surface measured vertically to the lowest possible overflow elevation (i.e., the top of the bank of the lagoon/storage/retention structure or any overflow structure).

**INNER MANAGEMENT ZONE (IMZ):** means the surface and subsurface area within a drinking water source protection area for a public water system using ground water surrounding a public water supply well(s) that will provide water to the well(s) within one year as delineated or endorsed by the Director under the wellhead protection program and the source water assessment and protection program.

**LAND APPLICATION:** means the placement of manure within the boundaries of a land application site by: 1) spraying or spreading onto the land surface; 2) injection below the land surface in the crop root zone using equipment specifically designed for this purpose; or 3) incorporation into the soil by means of the mixing of manure with the surface soil using standard agricultural practices, such as tillage.

**LARGE CAFO:** means an AFO that stables or confines as many as or more than the numbers of animals specified in any of the following categories: (i) 700 mature dairy cows, whether milked or dry; (ii) 1,000 veal calves; (iii) 1,000 cattle other than mature dairy cows or veal calves. Cattle includes but is not limited to heifers, steers, bulls and cow/calf pairs; (iv) 2,500 swine each weighing 55 pounds or more; (v) 10,000 swine each weighing less than 55 pounds; (vi) 500 horses; (vii) 10,000 sheep or lambs; (viii) 55,000 turkeys; (ix) 30,000 laying hens or broilers, if the AFO uses a liquid manure handling system; (x) 125,000 chickens (other than laying hens), if the AFO uses other than a liquid manure handling system; (xi) 82,000 laying hens, if the AFO uses other than a liquid manure handling system; (xii) 30,000 ducks (if the AFO uses other than a liquid manure handling system); (xiii) 5,000 ducks (if the AFO uses a liquid manure handling system).

**MANURE:** means any of the following wastes used in or resulting from the production of agricultural animals or direct agricultural products such as milk or eggs: animal excreta, discarded products, bedding, litter, process wastewater, process generated wastewater, waste feed, silage drainage and leachate, and compost products resulting from mortality composting or the composting of animal excreta.

**MANURE STORAGE OR TREATMENT FACILITY:** means any excavated, diked, or walled structure or combination of structures designed for the biological stabilization, holding, or storage of manure. This includes all collection ditches, conduits and swales for the collection of runoff from the production area and wastewater that is routed to the manure storage or treatment structure.

**MEDIUM CAFO:** means any AFO with the type and number of animals that fall within any of the ranges listed below and which has been defined or designated as a CAFO. An AFO is defined as a medium CAFO if: (1) The type and number of animals that it stables or confines falls within any of the following ranges: (i) 200-699 mature dairy cows, whether milked or dry; (ii) 300-999 veal calves; (iii) 300-999 cattle other than mature dairy cows or veal calves. Cattle includes but is not limited to heifers, steers, bulls and cow/calf pairs; (iv) 750-2,499 swine each weighing 55 pounds or more; (v) 3,000-9,999 swine each weighing less than 55 pounds; (vi) 150-499 horses; (vii) 3,000-9,999 sheep or lambs; (viii) 16,500-29,999 turkeys; (ix) 9,000-29,999 laying hens or broilers, if the AFO uses a liquid manure handling system; (x) 37,500-124,999 chickens (other than laying hens), if the AFO uses other than a liquid manure handling system; (xi) 25,000-81,999 laying hens, if the AFO uses other than a liquid manure handling system; (xii) 10,000-29,999 ducks, if the AFO uses other than a liquid manure handling system; (xiii) 1,500-4,999 ducks, if the AFO uses a liquid manure handling system and (2) Either one of the following conditions are met: (A) pollutants are discharged into waters of the State through a man-made ditch, flushing system, or other similar man-made device; or (B) pollutants are discharged directly into waters of the State which originate outside of and pass over, across, or through the facility or otherwise come into direct contact with the animals confined in the operation. An AFO may also be designated as a medium CAFO if it discharges by a method other than provided in (A) and (B).

**MULTI-YEAR PHOSPHORUS APPLICATION:** means phosphorus applied to a field in excess of the crop needs for that year. In multi-year phosphorus applications, no additional manure, litter, or process wastewater is applied to the same land in subsequent years until the applied phosphorus has been removed from the field via harvest and crop removal.

**NON-CONTACT COOLING WATER:** means the water used to reduce temperature that does not come into contact with any raw material, intermediate product, waste product (other than heat), or finished product. Non-contact cooling water does not include any process waters or other type of wastewaters, nor is it exposed to anything but the inside of the pipe. Non-contact cooling water shall be free from contaminants (e.g., metals, ammonia, organics, and total dissolved solids) in amounts that exhibit the reasonable potential to cause or contribute to exceedances of Ohio's water quality standards.

**OVERFLOW:** means the discharge of manure resulting from the filling of manure storage structures beyond the point at which no more manure, process wastewater, or storm water can be contained by the structures.

**POLLUTANT:** means the following as defined under 40 CFR 122.2: "dredged spoil, solid waste, incinerator residue, filter back-wash, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials..., heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste discharged into water."

**PROCESS WASTEWATER:** means water directly or indirectly used in the operation of the AFO for any or all of the following: spillage or overflow from animal or poultry watering systems; washing, cleaning or flushing pens, barns, manure pits or other AFO facilities; direct contact swimming, washing, or spray cooling of animals; and dust control. Process wastewater also includes any water which comes into contact with any raw materials, products or byproducts, including manure, litter, feed, milk, eggs or bedding.

**PRODUCTION AREA:** means that part of an AFO that includes the animal confinement area, the manure storage area, the raw materials storage area, and the waste containment areas. The animal confinement area includes but is not limited to open lots, housed lots, feedlots, confinement houses, stall barns, free stall barns, milkrooms, milking centers, cowyards, barnyards, medication pens, walkers, animal walkways, and stables. The manure storage area includes but is not limited to lagoons, runoff ponds, storage sheds, stockpiles, under house or pit storages, liquid impoundments, static piles, and composting piles. The raw materials storage area includes but is not limited to feed silos, silage bunkers, bedding materials, and areas used for storage of pesticides, herbicides, disinfectants, pharmaceuticals, and fertilizers. The waste containment area includes but is not limited to settling basins, and areas within berms and diversions which separate uncontaminated storm water. Also included in the definition of production areas is any egg washing or egg processing facility, and any area used in the storage, handling, treatment or disposal of mortalities.

**PUBLIC WATER SYSTEM (PWS):** means a system which provides water for human consumption through pipes or other constructed conveyances, if such system has at least fifteen service connections or regularly serves an average of at least twenty-five individuals daily at least sixty days out of the year. Such term includes any collection, treatment, storage, and distribution facilities under control of the operator of such system and used primarily in connection with such system, any collection or pretreatment storage facilities not under such control which are primarily in connection with such system, and any water supply system serving an agriculture labor camp, as defined in section 3733.41 of the Revised Code. A public water system is either a community water system or a noncommunity water system. A community water system means a public water system which serves at least fifteen service connections used by year-round residents or regularly serves at least twenty-five year-round residents. A noncommunity water system means a public water system that is not a community water system. A nontransient noncommunity water system means a public water system that is not a community water system and that regularly serves at least twenty-five of the same persons six months per year. A transient noncommunity water system means a noncommunity public water system that does not regularly serve at least twenty-five of the same persons over six months of the year.

**SETBACK:** means a specified distance from surface waters or potential conduits to surface waters where manure, litter, and process wastewater may not be land applied. Examples of conduits to surface waters include but are not limited to: open tile line intake structures, sinkholes, and agriculture wellheads.

**SOURCE WATER ASSESSMENT AND PROTECTION PROGRAM:** means Ohio EPA's source water assessment and protection program based on the Safe Drinking Water Act (88 Stat. 1660, 42 U.S.C. 300(f), as amended in 1996) and approved by U.S. EPA in November 1999.

**SPILL:** means a discharge, usually (but not exclusively) a small, inadvertent discharge of manure, toxic pollutant or hazardous substance, not caused by weather conditions.

**STORM WATER ASSOCIATED WITH INDUSTRIAL ACTIVITY:** means the following under 40 CFR Part 122.26, "discharge from any conveyance that is used for collecting and conveying storm water and that is directly related to manufacturing, processing or raw materials storage areas at an industrial plant. This term includes, but is not limited to, storm water discharges from industrial plant yards; immediate access roads and rail lines used or traveled by carriers of raw materials, manufactured products, waste material, or by-products used or created by the facility; material handling sites; refuse sites; sites used for the application or disposal of process wastewaters (as defined in 40 CFR Part 401); sites used for the storage and maintenance of material handling equipment; sites used for residual treatment, storage, or disposal; shipping and receiving areas; manufacturing buildings; storage areas (including tank farms) for raw materials, and intermediate and final products; and areas where industrial activity has taken place in the past and significant materials remain and are exposed to storm water. Material handling activities include storage, loading and unloading, transportation, or conveyance of any raw product, intermediate product, final product, by-product or waste product. The term excludes areas located on plant lands separate from the plant's industrial activities, such as office buildings and accompanying parking lots as long as the drainage from the excluded areas is not mixed with storm water drained from the above described areas."

**UPSET:** means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment or storage facilities, inadequate treatment or storage facilities, lack of preventative maintenance, or careless or improper operation.

**VEGETATED BUFFER:** means a narrow, permanent strip of dense perennial vegetation established parallel to the contours of and perpendicular to the dominant slope of the field for the purposes of slowing water runoff, enhancing water infiltration, and minimizing the risk of any potential nutrients or pollutants from leaving the field and reaching surface waters.

**WATER QUALITY STANDARDS:** defined in 40 CFR 130.2(d) as: "Provisions of State or Federal law which consist of a designated use or uses for the waters of the United States and water quality criteria for such waters based upon such uses. Water quality standards are to protect the public health or welfare, enhance the quality of water and serve the purposes of the Clean Water Act." The State of Ohio's water quality standards are contained in Ohio Administrative Code (OAC) 3745-1.

**WATERS OF THE STATE:** defined in Rule ORC 6111.01(H) as: "means all streams, lakes, ponds, marshes, watercourses, waterways, wells, springs, irrigation systems, drainage systems, and all other bodies or accumulations of water, surface and underground, natural or artificial, regardless of the depth of the strata in which underground water is located, which are situated wholly or partly within, or border upon, this state, or are within its jurisdiction, except those private waters which do not combine or effect a junction with natural surface or underground waters."

**WELLHEAD PROTECTION PROGRAM:** means Ohio EPA's wellhead protection program based on the Safe Drinking Water Act (88 Stat. 1660, 42 U.S.C. 300(f), as amended in 1996) and approved by U.S. EPA in November 1992.

#### 5. STATION DESCRIPTION.

Description of the location of the required sampling station is as follows:

2IK00023601- Inlet to the outfall discharge pipe from water treatment unit prior to discharging to the unnamed tributary of West Branch Tontogany Creek.

**Exemption 6**

2IK00023901- Storm Water Monitoring: Inlet to the outfall discharge pipe from the storm water pond prior to discharging to the unnamed tributary of West Branch Tontogany Creek.

**Exemption 6**



Part I, B. - MONITORING REQUIREMENTS

1. Storm Water Monitoring. During the period beginning upon the completion of construction activities and expansion of operations in accordance with the Permit-to-Install issued by ODA on July 13, 2009, the permittee shall monitor the Clean Storm Water Detention Basin Outfall at Station Number 2IK00023901, and report to the Ohio EPA in accordance with the following table. See Part I, A, 5 for location of sampling.

Table - Downstream-Nearfield Monitoring - Final

Effluent Characteristic  Parameter	Discharge Limitations							Monitoring Requirements		
	Concentration Specified Units		Loading* kg/day					Measuring Frequency	Sampling Type	Monitoring Months
	Maximum	Minimum	Weekly	Monthly	Daily	Weekly	Monthly			
00045 - Total Precipitation - Inches	-	-	-	-	-	-	-	Continuous	24hr Total	Semi-annual - 5
00056 - Flow Rate - GPD	-	-	-	-	-	-	-	2/Year	Estimate	Semi-annual - 5
00310 - Biochemical Oxygen Demand, 5 Day - mg/l	-	-	-	-	-	-	-	2/Year	Grab	Semi-annual - 5
00400 - pH - S.U.	9.0	6.5	-	-	-	-	-	2/Year	Grab	Semi-annual - 5
00610 - Nitrogen, Ammonia (NH3) - mg/l	-	-	-	-	-	-	-	2/Year	Grab	Semi-annual - 5
00665 - Phosphorus, Total (P) - mg/l	-	-	-	-	-	-	-	2/Year	Grab	Semi-annual - 5

NOTES for Station Number 2IK00023901:

Discharge Monitoring Reports (DMRs) for this Station must be submitted for the months of May and November.

a. PARAMETER 00045 - Total Precipitation shall be reported for at least two days prior to the sampling event as well as the day of the sampling event.

b. PARAMETERS 00310 - BOD5, 00610 - Ammonia, and 00665 - Total Phosphorus shall be monitored and reported twice per year (2/Year) during the months of May and November during wet weather when the storm water detention basin is discharging. The exact day/time of monitoring shall be determined in the field by the operator provided that the samples are collected by grab sample from the detention basin outlet during a storm event that is greater than 0.1 inches in magnitude and that occurs at least 72 hours from the previously measureable (greater than 0.1 inch rainfall) storm event but no greater than the 25-year, 24-hour storm event. The grab samples shall be taken during the first thirty (30) minutes of the rainfall event. If collection of a grab sample during the first thirty (30) minutes is impractical, a grab sample can be taken during the first hour of the rainfall event, and the permittee shall submit with the monitoring report a description of why a grab sample during the first thirty minutes was impractical.

- c. PARAMETERS 00056 - Flow Rate and 00400 - pH shall be monitored and reported twice per year (2/year) during the months of May and November when the non-contact cooling water is discharging into the the clean storm water detention basin.
- d. Grab samples shall be collected at such times and locations, and in such a fashion, as to be representative of storm water discharges from the facility.
- e. For the period of time prior to the installation of the storm water detention basin, e-DMR submittals for this station should indicate that there has been no discharge by marking the "No Discharge" checkbox at the top of the e-DMR form.

2. Water Treatment Back Flush Water Monitoring. During the period beginning on the modification effective date of this permit and lasting until the modification expiration date, the permittee shall monitor the Water Treatment Back Flush Water Outfall at Station Number 2IK00023601, and report to the Ohio EPA in accordance with the following table. See Part I, A, 5 for location of sampling.

Table - Downstream-Nearfield Monitoring - Final - Interim - 601 - Interim

Effluent Characteristic  Parameter	Discharge Limitations							Monitoring Requirements		
	Concentration Specified Units		Loading* kg/day					Measuring Frequency	Sampling Type	Monitoring Months
	Maximum	Minimum	Weekly	Monthly	Daily	Weekly	Monthly			
00056 - Flow Rate - GPD	-	-	-	-	-	-	-	2/Year	Grab	March and Sep.
00400 - pH - S.U.	9.0	6.5	-	-	-	-	-	2/Year	Grab	March and Sep.
00530 - Total Suspended Solids - mg/l	-	-	-	-	-	-	-	2/Year	Grab	March and Sep.
00610 - Nitrogen, Ammonia (NH3) - mg/l	-	-	-	-	-	-	-	2/Year	Grab	March and Sep.
70300 - Residue, Total Filterable - mg/l	-	-	-	-	-	-	-	2/Year	Grab	March and Sep.

NOTES for Station Number 2IK00023601:

Discharge Monitoring Reports (DMRs) for this Station must be submitted for the months of March and September.

a. PARAMETERS 00056 - Flow Rate, 00400 - pH, 00530 - Total Suspended Solids, 00610 - Ammonia, and 70300 - Total Filterable Residue shall be monitored and reported twice per year (2/year) during the months of March and September when the water treatment back flush water is discharging into the unnamed tributary of West Branch Tontogany Creek.

b. Monitoring data required by this permit must be submitted to Ohio EPA using the electronic Discharge Monitoring Report (e-DMR) internet application.

Please view the following web page for more information: <http://www.epa.ohio.gov/dsw/edmr/eDMR.aspx>

c. If water treatment back flush water is not discharged into the unnamed tributary of West Branch Tontogany Creek at any time in March or September then the "No Discharge" checkbox at the top of the e-DMR form shall be marked.

Part I, C - SCHEDULE OF COMPLIANCE

1. MANURE MANAGEMENT PLAN

A. As soon as possible, but no later than July 19, 2012, **Exemption 6** Dairy LLC must develop and begin implementation of an updated Manure Management Plan that is created in accordance with this permit and which meets the requirements of the 2008 Federal CAFO Rule. **Exemption 6** Dairy LLC shall take the actions described below as expeditiously as practicable, but no later than the dates set in accordance with the following schedule.

(1) As soon as possible but no later than May 1, 2010, **Exemption 6** Dairy LLC shall submit to Ohio EPA, Central Office, Division of Surface Water the results of the most recent soil tests for the fields used for land application of manure by **Exemption 6** Dairy LLC and which are listed within the Manure Management Plan utilized by **Exemption 6** Dairy LLC. <Event Code 5699>

(2) As soon as possible but no later than January 19, 2012, **Exemption 6** Dairy LLC shall begin development of an updated Manure Management Plan which meets the requirements of the 2008 Federal CAFO Rule and this permit. It is acceptable to develop the Manure Management Plan which would be included as part of a renewal of the Permit-to-Operate issued to **Exemption 6** Dairy LLC by the Ohio Department of Agriculture. Written affirmation of the status of the Manure Management Plan development and an outline of steps needed to develop the updated Manure Management Plan shall be submitted to Ohio EPA, Central Office, Division of Surface Water within one week of this deadline. <Event Code 95999>

(3) As soon as possible but no later than June 19, 2012, the updated Manure Management Plan shall be submitted to Ohio EPA, Central Office, Division of Surface Water for review and availability to the public. Ohio EPA will notify the permittee in writing if the submitted plan meets the minimum requirements of this permit and/or detail required modifications. <Event Code 1299>

(4) As soon as possible but no later than July 19, 2012, the final version of the updated Manure Management Plan shall be implemented. <Event Code 5699>

## Part II, OTHER REQUIREMENTS

A. This NPDES permit applies to the storage, collection, treatment, handling, and disposal/land application of manure, management of storm water associated with industrial activity, and discharge of water treatment back flush water associated with Exemption 6 Dairy LLC, which is currently designed to confine a maximum of Exemption 6 mature dairy cattle. The dairy has been approved by the Ohio Department of Agriculture to expand to a maximum of Exemption 6 mature dairy cattle. This operation shall not be expanded above Exemption 6 cows, or to encompass more land to be included in the production area, until Ohio EPA has been notified in writing of the intended actions. A modified NPDES permit (and updated Manure Management Plan) reflecting the expansion will be required for significant changes (e.g., greater than 10 percent increase in animals confined). For Manure Management Plan changes, see Part II, J.

Should Exemption 6 Dairy LLC confine more than Exemption 6 mature dairy cattle but less than Exemption 6 mature dairy cattle, Ohio EPA shall be notified and construction shall be completed in accordance with the Permit-to-Install issued to Exemption 6 Dairy LLC by the Ohio Department of Agriculture on July 19, 2009.

B. The discharge of manure or other wastes to waters of the State as defined in ORC 6111.01 and which include surface waters, wetlands (not including constructed treatment wetlands), and ditches is prohibited except in compliance with this permit.

C. Spill prevention and good housekeeping techniques, along with diversion of clean water, shall be used to ensure that uncontained storm water from the production area is not contaminated by manure and to ensure that storm water discharges from the following areas maintain compliance with Ohio Water Quality Standards in the receiving waters of the State: immediate access roads and rail lines used or traveled by carriers or raw materials, products, waste material, or by-products used or created by the CAFO; refuse sites; sites used for the storage and maintenance of material handling equipment; and shipping and receiving areas. Storm water that is contaminated by manure or raw material (such as silage) is process wastewater, which is included in the definition of manure in Part I, A, 4, and may only be discharged in accordance with Part I, A of this permit.

D. Exemption 6 Dairy LLC shall maintain the manure storage or treatment facilities (including regular solids removal) to ensure that the design storage volume is provided, as approved by Ohio EPA or ODA or necessary to achieve compliance with this permit, whichever is greater. See Part VII.

E. For all open manure storage or treatment structures, a minimum freeboard of one foot must be maintained at all times. This is in addition to the capacity needed to contain direct precipitation and runoff from the 100-year, 24-hour storm. These structures must be equipped with a depth marker which clearly indicates the minimum capacity to contain the runoff and precipitation of the 100-year, 24-hour storm event. If this freeboard is violated, Exemption 6 Dairy LLC shall immediately begin investigating removal options. See Part VII, Production Area Requirements.

- F. The permittee shall give advance notice to Ohio EPA of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.
- G. The permittee (or employee(s) appointed by the owner/operator) shall attend a manure management and water quality protection training and/or seminar at least once per year. Examples of training/seminars include Ohio State University Extension Manure Science Review, participation in the Livestock Environmental Assurance Program (LEAP), and Ohio Department of Agriculture's Certified Livestock Manager training. The permittee shall maintain documentation of training/seminar attendance in the facility records and submit a copy with the annual report. See Part II, K.
- H. The permittee shall be responsible for proper operation and maintenance of the manure storage, treatment, or disposal system.
- I. Any variation from the operational practices included in this NPDES permit must be authorized by Ohio EPA in advance.

J. Manure Management Plans

With the exception of Insect and Rodent Control Plans, the Manure Management Plan (MMP) included within the Permit-to-Operate issued by the Ohio Department of Agriculture on July 19, 2007, reviewed, and approved by the Director through issuance of this NPDES permit is incorporated as a condition of this NPDES permit.

1. SIGNATURE AND PLAN REVIEW

- a. The plan shall be retained onsite at the CAFO.
- b. The Director may notify the permittee at any time that the plan does not meet one or more of the minimum requirements of this permit. Within 30 days of such notification from the Director, the permittee shall make the required changes to the plan and shall submit to the Director a revised plan demonstrating that the requested changes have been made.

2. KEEPING PLANS CURRENT

The permittee shall amend the plan prior to a change in design, construction, operation, or maintenance, which has an effect on the potential for the discharge of pollutants to the surface waters of the State or if the MMP proves to be ineffective in eliminating or minimizing pollutants from sources identified under Part I, A, 3, or otherwise achieving the general objectives of minimizing pollutant discharges associated with the CAFO.

When a permittee proposes to make changes to the MMP previously submitted to and approved by the Director, the permittee shall provide the Director with the most current version of the MMP and identify changes from the previous version in a cover letter prior to implementation of the changes. The results of calculations made in accordance with Part II, J, 4 are not subject to this notification requirement.



The Director will review the revised MMP to ensure that it meets the requirements of this permit and will determine whether the changes to the MMP necessitate revision to the terms of the MMP incorporated into this permit. If no revision is necessary, the Director will notify the permittee and upon such notification the permittee shall implement the revised plan. If revision to the terms of the MMP is necessary, the Director will follow the applicable modification process in 40 CFR Part 122.42(e)(6)(A) to revise the terms of the MMP incorporated into this permit. Modified MMP submittals with substantial changes are subject to a 30-day public notification period on the Ohio EPA website.

Examples of substantial changes to a MMP requiring a permit modification include, but are not limited to:

- a. Addition of new land application areas not previously included in the MMP;
- b. Any changes to the field-specific maximum annual rates for land application and to the maximum amounts of nitrogen and phosphorus derived from all sources for each crop;
- c. Addition of any crop or other uses not included in the MMP and corresponding field-specific rates of application; and
- d. Changes to site-specific components of the MMP, where such changes are likely to increase the risk of nitrogen and phosphorus transport to waters of the State.

### 3. CONTENTS OF PLAN

The manure management plan shall address the form, source, amount, timing, agronomic rate, and method of application of nutrients to each field to achieve compliance with this permit, ensure appropriate agricultural utilization of the nutrients, and minimize movement of pollutants to surface waters. To the extent applicable, the MMP shall address the following:

- a. Storage of manure, management of mortalities, diversion of clean water, prevention of contact of animals with waters of the State, and proper chemical handling to ensure compliance with Part I, A, 1, Part II, and Part VII of this permit.
- b. Inspections, monitoring, and maintenance activities for structures and equipment involved in manure handling and storage in compliance with Part II and Part VII, Production Area Requirements of this permit.
- c. If applicable, a manure land application plan that will be implemented to comply with Part VII of this permit, including: 1) a total nutrient budget; 2) manure and soil characterizations; 3) application methods and timing that will minimize nutrient transport to waters of the State; and 4) field specific agronomic application rates.
- d. If applicable, a manure distribution and utilization plan including: 1) total nutrient budget; 2) manure characterization; and 3) manure removal methods and timing that will minimize nutrient transport to waters of the State.
- e. Site specific conservation practices to be implemented, including as appropriate buffers or equivalent practices, to control runoff of pollutants to waters of the State.

### 4. ANNUAL CALCULATIONS

The permittee shall calculate the maximum amount of manure to be land applied at least once each year using the results of the most recent representative manure tests for nitrogen and phosphorus taken within twelve months of the date of land application. The results shall be submitted to Ohio EPA by January 31 of each year as part of the Annual Report. See Part II, K.

## 5. ANNUAL REVIEW

The annual review and update shall include field-specific information that identifies when manure will be applied, where manure will be applied, the method of application, and how much manure will be applied to each field during the following growing season, except where manure ownership is transferred. The permittee shall annually review the MMP for the following:

1. Manure sources or amounts.
2. Manure nutrient content.
3. Methods of application.
4. Fields used for application.
5. Crop rotations.
6. Expected crop yields.
7. Soil test results.
8. Manure storage practices.
9. Other management changes which affect the available nutrient amounts, crop nutrient needs, setbacks, or production area operation and maintenance.

K. ANNUAL REPORT: By January 31 of each year, the permittee shall submit an annual report to Ohio EPA, Central Office, Division of Surface Water. The annual report shall be submitted on forms prepared by the Director and shall include, but not necessarily be limited to, the following:

1. The number and type of animals confined in the previous year.
2. Estimated amount of manure generated in the previous year in gallons or tons.
3. Total amount of manure removed from the facility for land application and/or distribution or utilization in gallons or tons.
4. Total number of acres for land application covered by the MMP.
5. Total number of acres under the control of the permittee that were used for land application in the previous year.
6. Manure distribution or utilization records.
7. Summary of the number of discharges from the production area and the number of discharges from land application areas that were not composed of agricultural storm water runoff for the past year, including date, time and approximate volumes.
8. Information on any non-compliance not previously reported to Ohio EPA. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.
9. A statement indicating if the MMP was developed by a certified manure management planner.
10. A copy of the training/seminar attendance documentation required by Part II, G of this permit.
11. The actual crop(s) planted and actual yield(s) for each field, the actual nitrogen and phosphorus content of the manure, the results of calculations conducted in accordance with Part II, J, 4, and the amount of manure applied to each field during the previous twelve months.

L. Distribution and Utilization: For manure that is distributed to other persons (per Part VII, B, 6 of this permit), the permittee shall record the recipient's name and address, the approximate amount of manure transferred to that recipient, and the date of the transfer. The permittee shall provide the most current manure nutrient analysis to the recipient. If the permittee is notified by Ohio EPA, Ohio Department of Agriculture, or Ohio Department of Natural Resources, or otherwise becomes aware that the recipient is not in compliance with ORC 6111 (e.g., causing a nonexempt discharge of manure to waters of the State), the permittee shall cease providing manure to the recipient until written authorization to continue is provided by Ohio EPA.

#### OPERATION/MANAGEMENT PRACTICES

M. The manure handling equipment shall be effectively maintained and operated at all times so that there is no discharge to waters of the State, except in compliance with Part I, A. In the event that the equipment fails to perform satisfactorily, including the creation of nuisance conditions or failure of an application area to adequately assimilate the manure, the permittee shall take immediate corrective actions including those actions that may be required by Ohio EPA, such as the acquisition of equipment capable of properly applying manure in the proper approved amounts in accordance with this permit.

N. In the event that this facility is closed for production purposes or is no longer a CAFO, this permit shall remain effective until the permittee demonstrates to the satisfaction of the Director that there is no remaining potential for a discharge of manure that was generated while the operation was a CAFO, other than agricultural storm water from land application areas. All manure shall be properly disposed of, and in the case of facility closure, the manure storage or treatment facilities shall be properly closed.

O. A protective vegetative cover shall be established and maintained on all earthen basin embankments (outside toe of embankment to maximum operating elevation), berms, pipe runs, erosion control areas, and surface water diversions. Trees, shrubs, and other woody vegetation shall not be allowed to grow on the earthen basin, dikes, or embankments. Earthen basin embankment areas shall be kept mowed or otherwise controlled and accessible.

P. Adequate manure storage volume shall be provided and maintained to prevent the necessity of land applying manure on frozen and/or snow covered ground. No later than September 15 of each year, the permittee shall evaluate the storage capacity in their manure storage or treatment facilities and determine what steps are needed to avoid the need to land apply manure on frozen or snow covered fields for the upcoming winter. For example, a CAFO should plan to have at least four months of storage capacity available by December 1. The operating record for the facility shall include documentation of the storage level as well as what is considered in this evaluation, and what actions were taken to avoid the need for land application of manure on frozen or snow covered ground. Failure to perform the evaluation or failure to take action if the evaluation indicated that action was necessary to avoid land application on frozen or snow covered ground shall be considered a violation of this permit. See Part VII, B, 5.

Q. A rain gauge shall be kept on site at the CAFO and properly maintained. A log of all measurable rainfall events shall be kept with the Manure Management Plan.

R. All records required by this permit including documentation of inspections and manure land application must be retained by the permittee for a period of five years from the date of the documented activity. This includes a complete copy of the information required by 40 CFR 122.21(i)(1) and 40 CFR 122.42 (e)(2) and the records specified in paragraphs (b)(1) through (b)(6) of 40 CFR 412.37.

S. This permit shall be modified, or alternatively, revoked and reissued, to comply with any applicable effluent standard or limitation issued or approved under Sections 301(b)(2)(C) and (D), 304(b)(2), and 307(a)(2) of the Clean Water Act, if the effluent standard or limitation so issued or approved.

1. Contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or
2. Controls any pollutant not limited in the permit.

The permit as modified or reissued under this paragraph shall also contain any other requirements of the Act then applicable.

T. In the event that the permittee's operation requires the use of cooling or boiler water treatment additives that are discharged to surface waters of the State, written permission must be obtained from the director of the Ohio EPA prior to use. Reporting and testing requirements to apply for permission to use additives can be obtained from the Ohio EPA, Central Office, Division of Surface Water, Additive Approval. Reported information will be used to evaluate whether the use of the additive(s) at concentrations expected in the final discharge will be harmful or inimical to aquatic life.

U. Final permit limitations based on preliminary or approved waste load allocations are subject to change based on modifications to or finalization of the allocation or report or changes to Water Quality Standards. Monitoring requirements and/or special conditions of this permit are subject to change based on regulatory or policy changes.

V. Grab samples shall be collected at such times and locations, and in such fashion, as to be representative of the facility's performance.

## PART III - GENERAL CONDITIONS

### 1. DEFINITIONS

"Daily discharge" means the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in units of mass, the "daily discharge" is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the "daily discharge" is calculated as the average measurement of the pollutant over the day.

"Average weekly" discharge limitation means the highest allowable average of "daily discharges" over a calendar week, calculated as the sum of all "daily discharges" measured during a calendar week divided by the number of "daily discharges" measured during that week. Each of the following 7-day periods is defined as a calendar week: Week 1 is Days 1 - 7 of the month; Week 2 is Days 8 - 14; Week 3 is Days 15 - 21; and Week 4 is Days 22 - 28. If the "daily discharge" on days 29, 30 or 31 exceeds the "average weekly" discharge limitation, Ohio EPA may elect to evaluate the last 7 days of the month as Week 4 instead of Days 22 - 28. Compliance with fecal coliform bacteria or E coli bacteria limitations shall be determined using the geometric mean.

"Average monthly" discharge limitation means the highest allowable average of "daily discharges" over a calendar month, calculated as the sum of all "daily discharges" measured during a calendar month divided by the number of "daily discharges" measured during that month. Compliance with fecal coliform bacteria or E coli bacteria limitations shall be determined using the geometric mean.

"85 percent removal" means the arithmetic mean of the values for effluent samples collected in a period of 30 consecutive days shall not exceed 15 percent of the arithmetic mean of the values for influent samples collected at approximately the same times during the same period.

"Absolute Limitations" Compliance with limitations having descriptions of "shall not be less than," "nor greater than," "shall not exceed," "minimum," or "maximum" shall be determined from any single value for effluent samples and/or measurements collected.

"Net concentration" shall mean the difference between the concentration of a given substance in a sample taken of the discharge and the concentration of the same substances in a sample taken at the intake which supplies water to the given process. For the purpose of this definition, samples that are taken to determine the net concentration shall always be 24-hour composite samples made up of at least six increments taken at regular intervals throughout the plant day.

"Net Load" shall mean the difference between the load of a given substance as calculated from a sample taken of the discharge and the load of the same substance in a sample taken at the intake which supplies water to given process. For purposes of this definition, samples that are taken to determine the net loading shall always be 24-hour composite samples made up of at least six increments taken at regular intervals throughout the plant day.

"MGD" means million gallons per day.

"mg/l" means milligrams per liter.

"ug/l" means micrograms per liter.

"ng/l" means nanograms per liter.

"S.U." means standard pH unit.

"kg/day" means kilograms per day.

"Reporting Code" is a five digit number used by the Ohio EPA in processing reported data. The reporting code does not imply the type of analysis used nor the sampling techniques employed.

"Quarterly (1/Quarter) sampling frequency" means the sampling shall be done in the months of March, June, August, and December, unless specifically identified otherwise in the Effluent Limitations and Monitoring Requirements table.

"Yearly (1/Year) sampling frequency" means the sampling shall be done in the month of September, unless specifically identified otherwise in the effluent limitations and monitoring requirements table.

"Semi-annual (2/Year) sampling frequency" means the sampling shall be done during the months of June and December, unless specifically identified otherwise.

"Winter" shall be considered to be the period from November 1 through April 30.

"Bypass" means the intentional diversion of waste streams from any portion of the treatment facility.

"Summer" shall be considered to be the period from May 1 through October 31.

"Severe property damage" means substantial physical damage to property, damage to the treatment facilities which would cause them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

"Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.



"Sewage sludge" means a solid, semi-solid, or liquid residue generated during the treatment of domestic sewage in a treatment works as defined in section 6111.01 of the Revised Code. "Sewage sludge" includes, but is not limited to, scum or solids removed in primary, secondary, or advanced wastewater treatment processes. "Sewage sludge" does not include ash generated during the firing of sewage sludge in a sewage sludge incinerator, grit and screenings generated during preliminary treatment of domestic sewage in a treatment works, animal manure, residue generated during treatment of animal manure, or domestic septage.

"Sewage sludge weight" means the weight of sewage sludge, in dry U.S. tons, including admixtures such as liming materials or bulking agents. Monitoring frequencies for sewage sludge parameters are based on the reported sludge weight generated in a calendar year (use the most recent calendar year data when the NPDES permit is up for renewal).

"Sewage sludge fee weight" means the weight of sewage sludge, in dry U.S. tons, excluding admixtures such as liming materials or bulking agents. Annual sewage sludge fees, as per section 3745.11(Y) of the Ohio Revised Code, are based on the reported sludge fee weight for the most recent calendar year.

## 2. GENERAL EFFLUENT LIMITATIONS

The effluent shall, at all times, be free of substances:

- A. In amounts that will settle to form putrescent, or otherwise objectionable, sludge deposits; or that will adversely affect aquatic life or water fowl;
- B. Of an oily, greasy, or surface-active nature, and of other floating debris, in amounts that will form noticeable accumulations of scum, foam or sheen;
- C. In amounts that will alter the natural color or odor of the receiving water to such degree as to create a nuisance;
- D. In amounts that either singly or in combination with other substances are toxic to human, animal, or aquatic life;
- E. In amounts that are conducive to the growth of aquatic weeds or algae to the extent that such growths become inimical to more desirable forms of aquatic life, or create conditions that are unsightly, or constitute a nuisance in any other fashion;
- F. In amounts that will impair designated instream or downstream water uses.

## 3. FACILITY OPERATION AND QUALITY CONTROL

All wastewater treatment works shall be operated in a manner consistent with the following:

- A. At all times, the permittee shall maintain in good working order and operate as efficiently as possible all treatment or control facilities or systems installed or used by the permittee necessary to achieve compliance with the terms and conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with conditions of the permit.
- B. The permittee shall effectively monitor the operation and efficiency of treatment and control facilities and the quantity and quality of the treated discharge.
- C. Maintenance of wastewater treatment works that results in degradation of effluent quality shall be scheduled during non-critical water quality periods and shall be carried out in a manner approved by Ohio EPA as specified in the Paragraph in the PART III entitled, "UNAUTHORIZED DISCHARGES".

#### 4. REPORTING

A. Monitoring data required by this permit shall be submitted on Ohio EPA 4500 Discharge Monitoring Report (DMR) forms using the electronic DMR (e-DMR) internet application. e-DMR allows permitted facilities to enter, sign, and submit DMRs on the internet. e-DMR information is found on the following web page:

<http://www.epa.ohio.gov/dsw/edmr/eDMR.aspx>

Alternatively, if you are unable to use e-DMR due to a demonstrated hardship, monitoring data may be submitted on paper DMR forms provided by Ohio EPA. Monitoring data shall be typed on the forms. Please contact Ohio EPA, Division of Surface Water at (614) 644-2050 if you wish to receive paper DMR forms.

B. DMRs shall be signed by a facility's Responsible Official or a Delegated Responsible Official (i.e. a person delegated by the Responsible Official). The Responsible Official of a facility is defined as:

1. For corporations - a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision making functions for the corporation; or the manager of one or more manufacturing, production or operating facilities, provided the manager is authorized to make management decisions which govern the operation of the regulated facility including having explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long-term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;
2. For partnerships - a general partner;
3. For a sole proprietorship - the proprietor; or,
4. For a municipality, state or other public facility - a principal executive officer, a ranking elected official or other duly authorized employee.

For e-DMR, the person signing and submitting the DMR will need to obtain an eBusiness Center account and Personal Identification Number (PIN). Additionally, Delegated Responsible Officials must be delegated by the Responsible Official, either on-line using the eBusiness Center's delegation function, or on a paper delegation form provided by Ohio EPA. For more information on the PIN and delegation processes, please view the following web page:

<http://www.epa.ohio.gov/dsw/edmr/eDMRpin.aspx>

C. DMRs submitted using e-DMR shall be submitted to Ohio EPA by the 20th day of the month following the month-of-interest. DMRs submitted on paper must include the original signed DMR form and shall be mailed to Ohio EPA at the following address so that they are received no later than the 15th day of the month following the month-of-interest:

Ohio Environmental Protection Agency  
Lazarus Government Center  
Division of Surface Water - PCU  
P.O. Box 1049  
Columbus, Ohio 43216-1049

D. Regardless of the submission method, a paper copy of the submitted Ohio EPA 4500 DMR shall be maintained onsite for records retention purposes (see Section 7. RECORDS RETENTION). For e-DMR users, view and print the DMR from the Submission Report Information page after each original or revised DMR is submitted. For submittals on paper, make a copy of the completed paper form after it is signed by a Responsible Official or a Delegated Responsible Official.

E. If the permittee monitors any pollutant at the location(s) designated herein more frequently than required by this permit, using approved analytical methods as specified in Section 5. SAMPLING AND ANALYTICAL METHODS, the results of such monitoring shall be included in the calculation and reporting of the values required in the reports specified above.

F. Analyses of pollutants not required by this permit, except as noted in the preceding paragraph, shall not be reported to the Ohio EPA, but records shall be retained as specified in Section 7. RECORDS RETENTION.

#### 5. SAMPLING AND ANALYTICAL METHOD

Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored flow. Test procedures for the analysis of pollutants shall conform to regulation 40 CFR 136, "Test Procedures For The Analysis of Pollutants" unless other test procedures have been specified in this permit. The permittee shall periodically calibrate and perform maintenance procedures on all monitoring and analytical instrumentation at intervals to insure accuracy of measurements.

#### 6. RECORDING OF RESULTS

For each measurement or sample taken pursuant to the requirements of this permit, the permittee shall record the following information:

- A. The exact place and date of sampling; (time of sampling not required on EPA 4500)
- B. The person(s) who performed the sampling or measurements;
- C. The date the analyses were performed on those samples;
- D. The person(s) who performed the analyses;
- E. The analytical techniques or methods used; and
- F. The results of all analyses and measurements.

## 7. RECORDS RETENTION

The permittee shall retain all of the following records for the wastewater treatment works for a minimum of three years except those records that pertain to sewage sludge disposal, use, storage, or treatment, which shall be kept for a minimum of five years, including:

- A. All sampling and analytical records (including internal sampling data not reported);
- B. All original recordings for any continuous monitoring instrumentation;
- C. All instrumentation, calibration and maintenance records;
- D. All plant operation and maintenance records;
- E. All reports required by this permit; and
- F. Records of all data used to complete the application for this permit for a period of at least three years, or five years for sewage sludge, from the date of the sample, measurement, report, or application.

These periods will be extended during the course of any unresolved litigation, or when requested by the Regional Administrator or the Ohio EPA. The three year period, or five year period for sewage sludge, for retention of records shall start from the date of sample, measurement, report, or application.

## 8. AVAILABILITY OF REPORTS

Except for data determined by the Ohio EPA to be entitled to confidential status, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the appropriate district offices of the Ohio EPA. Both the Clean Water Act and Section 6111.05 Ohio Revised Code state that effluent data and receiving water quality data shall not be considered confidential.

## 9. DUTY TO PROVIDE INFORMATION

The permittee shall furnish to the Director, within a reasonable time, any information which the Director may request to determine whether cause exists for modifying, revoking, and reissuing, or terminating the permit, or to determine compliance with this permit. The permittee shall also furnish to the Director, upon request, copies of records required to be kept by this permit.

## 10. RIGHT OF ENTRY

The permittee shall allow the Director or an authorized representative upon presentation of credentials and other documents as may be required by law to:

- A. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit.
- B. Have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit.
- C. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit.
- D. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act, any substances or parameters at any location.

## 11. UNAUTHORIZED DISCHARGES

A. Bypass Not Exceeding Limitations - The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraphs 11.B and 11.C.

### B. Notice

1. Anticipated Bypass - If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least ten days before the date of the bypass.

2. Unanticipated Bypass - The permittee shall submit notice of an unanticipated bypass as required in paragraph 12.B (24 hour notice).

### C. Prohibition of Bypass

1. Bypass is prohibited, and the Director may take enforcement action against a permittee for bypass, unless:

- a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
- b. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and

c. The permittee submitted notices as required under paragraph 11.B.

2. The Director may approve an anticipated bypass, after considering its adverse effects, if the Director determines that it will meet the three conditions listed above in paragraph 11.C.1.

## 12. NONCOMPLIANCE NOTIFICATION

### A. Exceedance of a Daily Maximum Discharge Limit

1. The permittee shall report noncompliance that is the result of any violation of a daily maximum discharge limit for any of the pollutants listed by the Director in the permit by e-mail or telephone within twenty-four (24) hours of discovery.

The permittee may report to the appropriate Ohio EPA district office e-mail account as follows (this method is preferred):

Southeast District Office: sedo24hournpdes@epa.state.oh.us  
Southwest District Office: swdo24hournpdes@epa.state.oh.us  
Northwest District Office: nwdo24hournpdes@epa.state.oh.us  
Northeast District Office: nedo24hournpdes@epa.state.oh.us  
Central District Office: cdo24hournpdes@epa.state.oh.us  
Central Office: co24hournpdes@epa.state.oh.us

The permittee shall attach a noncompliance report to the e-mail. A noncompliance report form is available on the following web site:

<http://www.epa.ohio.gov/dsw/permits/permits.aspx>

Or, the permittee may report to the appropriate Ohio EPA district office by telephone toll-free between 8:00 AM and 5:00 PM as follows:

Southeast District Office: (800) 686-7330  
Southwest District Office: (800) 686-8930  
Northwest District Office: (800) 686-6930  
Northeast District Office: (800) 686-6330  
Central District Office: (800) 686-2330  
Central Office: (614) 644-2001

The permittee shall include the following information in the telephone noncompliance report:

- a. The name of the permittee, and a contact name and telephone number;
- b. The limit(s) that has been exceeded;
- c. The extent of the exceedance(s);
- d. The cause of the exceedance(s);
- e. The period of the exceedance(s) including exact dates and times;
- f. If uncorrected, the anticipated time the exceedance(s) is expected to continue; and,
- g. Steps taken to reduce, eliminate or prevent occurrence of the exceedance(s).

**B. Other Permit Violations**

1. The permittee shall report noncompliance that is the result of any unanticipated bypass resulting in an exceedance of any effluent limit in the permit or any upset resulting in an exceedance of any effluent limit in the permit by e-mail or telephone within twenty-four (24) hours of discovery.

The permittee may report to the appropriate Ohio EPA district office e-mail account as follows (this method is preferred):

Southeast District Office: sedo24hournpdes@epa.state.oh.us  
Southwest District Office: swdo24hournpdes@epa.state.oh.us  
Northwest District Office: nwdo24hournpdes@epa.state.oh.us  
Northeast District Office: nedo24hournpdes@epa.state.oh.us  
Central District Office: cdo24hournpdes@epa.state.oh.us  
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Northwest District Office: (800) 686-6930  
Northeast District Office: (800) 686-6330  
Central District Office: (800) 686-2330  
Central Office: (614) 644-2001



The permittee shall include the following information in the telephone noncompliance report:

- a. The name of the permittee, and a contact name and telephone number;
  - b. The time(s) at which the discharge occurred, and was discovered;
  - c. The approximate amount and the characteristics of the discharge;
  - d. The stream(s) affected by the discharge;
  - e. The circumstances which created the discharge;
  - f. The name and telephone number of the person(s) who have knowledge of these circumstances;
  - g. What remedial steps are being taken; and,
  - h. The name and telephone number of the person(s) responsible for such remedial steps.
2. The permittee shall report noncompliance that is the result of any spill or discharge which may endanger human health or the environment within thirty (30) minutes of discovery by calling the 24-Hour Emergency Hotline toll-free at (800) 282-9378. The permittee shall also report the spill or discharge by e-mail or telephone within twenty-four (24) hours of discovery in accordance with B.1 above.
- C. When the telephone option is used for the noncompliance reports required by A and B, the permittee shall submit to the appropriate Ohio EPA district office a confirmation letter and a completed noncompliance report within five (5) days of the discovery of the noncompliance. This follow up report is not necessary for the e-mail option which already includes a completed noncompliance report.
- D. If the permittee is unable to meet any date for achieving an event, as specified in a schedule of compliance in their permit, the permittee shall submit a written report to the appropriate Ohio EPA district office within fourteen (14) days of becoming aware of such a situation. The report shall include the following:
1. The compliance event which has been or will be violated;
  2. The cause of the violation;
  3. The remedial action being taken;
  4. The probable date by which compliance will occur; and,
  5. The probability of complying with subsequent and final events as scheduled.
- E. The permittee shall report all other instances of permit noncompliance not reported under paragraphs A or B of this section on their monthly DMR submission. The DMR shall contain comments that include the information listed in paragraphs A or B as appropriate.
- F. If the permittee becomes aware that it failed to submit an application, or submitted incorrect information in an application or in any report to the director, it shall promptly submit such facts or information.

13. RESERVED

14. DUTY TO MITIGATE

The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

## 15. AUTHORIZED DISCHARGES

All discharges authorized herein shall be consistent with the terms and conditions of this permit. The discharge of any pollutant identified in this permit more frequently than, or at a level in excess of, that authorized by this permit shall constitute a violation of the terms and conditions of this permit. Such violations may result in the imposition of civil and/or criminal penalties as provided for in Section 309 of the Act and Ohio Revised Code Sections 6111.09 and 6111.99.

## 16. DISCHARGE CHANGES

The following changes must be reported to the appropriate Ohio EPA district office as soon as practicable:

A. For all treatment works, any significant change in character of the discharge which the permittee knows or has reason to believe has occurred or will occur which would constitute cause for modification or revocation and reissuance. The permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements. Notification of permit changes or anticipated noncompliance does not stay any permit condition.

B. For publicly owned treatment works:

1. Any proposed plant modification, addition, and/or expansion that will change the capacity or efficiency of the plant;
2. The addition of any new significant industrial discharge; and
3. Changes in the quantity or quality of the wastes from existing tributary industrial discharges which will result in significant new or increased discharges of pollutants.

C. For non-publicly owned treatment works, any proposed facility expansions, production increases, or process modifications, which will result in new, different, or increased discharges of pollutants.

Following this notice, modifications to the permit may be made to reflect any necessary changes in permit conditions, including any necessary effluent limitations for any pollutants not identified and limited herein. A determination will also be made as to whether a National Environmental Policy Act (NEPA) review will be required. Sections 6111.44 and 6111.45, Ohio Revised Code, require that plans for treatment works or improvements to such works be approved by the Director of the Ohio EPA prior to initiation of construction.

D. In addition to the reporting requirements under 40 CFR 122.41(l) and per 40 CFR 122.42(a), all existing manufacturing, commercial, mining, and silvicultural dischargers must notify the Director as soon as they know or have reason to believe:

1. That any activity has occurred or will occur which would result in the discharge on a routine or frequent basis of any toxic pollutant which is not limited in the permit. If that discharge will exceed the highest of the "notification levels" specified in 40 CFR Sections 122.42(a)(1)(i) through 122.42(a)(1)(iv).
2. That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the "notification levels" specified in 122.42(a)(2)(i) through 122.42(a)(2)(iv).

**17. TOXIC POLLUTANTS**

The permittee shall comply with effluent standards or prohibitions established under Section 307 (a) of the Clean Water Act for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement. Following establishment of such standards or prohibitions, the Director shall modify this permit and so notify the permittee.

**18. PERMIT MODIFICATION OR REVOCATION**

A. After notice and opportunity for a hearing, this permit may be modified or revoked, by the Ohio EPA, in whole or in part during its term for cause including, but not limited to, the following:

1. Violation of any terms or conditions of this permit;
2. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts; or
3. Change in any condition that requires either a temporary or permanent reduction or elimination of the permitted discharge.

B. Pursuant to rule 3745-33-04, Ohio Administrative Code, the permittee may at any time apply to the Ohio EPA for modification of any part of this permit. The filing of a request by the permittee for a permit modification or revocation does not stay any permit condition. The application for modification should be received by the appropriate Ohio EPA district office at least ninety days before the date on which it is desired that the modification become effective. The application shall be made only on forms approved by the Ohio EPA.

**19. TRANSFER OF OWNERSHIP OR CONTROL**

This permit may be transferred or assigned and a new owner or successor can be authorized to discharge from this facility, provided the following requirements are met:

A. The permittee shall notify the succeeding owner or successor of the existence of this permit by a letter, a copy of which shall be forwarded to the appropriate Ohio EPA district office. The copy of that letter will serve as the permittee's notice to the Director of the proposed transfer. The copy of that letter shall be received by the appropriate Ohio EPA district office sixty (60) days prior to the proposed date of transfer;

B. A written agreement containing a specific date for transfer of permit responsibility and coverage between the current and new permittee (including acknowledgement that the existing permittee is liable for violations up to that date, and that the new permittee is liable for violations from that date on) shall be submitted to the appropriate Ohio EPA district office within sixty days after receipt by the district office of the copy of the letter from the permittee to the succeeding owner;

At anytime during the sixty (60) day period between notification of the proposed transfer and the effective date of the transfer, the Director may prevent the transfer if he concludes that such transfer will jeopardize compliance with the terms and conditions of the permit. If the Director does not prevent transfer, he will modify the permit to reflect the new owner.

**20. OIL AND HAZARDOUS SUBSTANCE LIABILITY**

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under Section 311 of the Clean Water Act.

**21. SOLIDS DISPOSAL**

Collected grit and screenings, and other solids other than sewage sludge, shall be disposed of in such a manner as to prevent entry of those wastes into waters of the state, and in accordance with all applicable laws and rules.

**22. CONSTRUCTION AFFECTING NAVIGABLE WATERS**

This permit does not authorize or approve the construction of any onshore or offshore physical structures or facilities or the undertaking of any work in any navigable waters.

**23. CIVIL AND CRIMINAL LIABILITY**

Except as exempted in the permit conditions on UNAUTHORIZED DISCHARGES or UPSETS, nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance.

**24. STATE LAWS AND REGULATIONS**

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable state law or regulation under authority preserved by Section 510 of the Clean Water Act.

**25. PROPERTY RIGHTS**

The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state, or local laws or regulations.

**26. UPSET**

The provisions of 40 CFR Section 122.41(n), relating to "Upset," are specifically incorporated herein by reference in their entirety. For definition of "upset," see Part III, Paragraph 1, DEFINITIONS.

**27. SEVERABILITY**

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

**28. SIGNATORY REQUIREMENTS**

All applications submitted to the Director shall be signed and certified in accordance with the requirements of 40 CFR 122.22.

All reports submitted to the Director shall be signed and certified in accordance with the requirements of 40 CFR Section 122.22.

29. OTHER INFORMATION

A. Where the permittee becomes aware that it failed to submit any relevant facts in a permit application or submitted incorrect information in a permit application or in any report to the Director, it shall promptly submit such facts or information.

B. ORC 6111.99 provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than \$25,000 per violation.

C. ORC 6111.99 states that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit including monitoring reports or reports of compliance or noncompliance shall, upon conviction, be punished by a fine of not more than \$25,000 per violation.

D. ORC 6111.99 provides that any person who violates Sections 6111.04, 6111.042, 6111.05, or division (A) of Section 6111.07 of the Revised Code shall be fined not more than \$25,000 or imprisoned not more than one year, or both.

30. NEED TO HALT OR REDUCE ACTIVITY

40 CFR 122.41(c) states that it shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with conditions of this permit.

31. APPLICABLE FEDERAL RULES

All references to 40 CFR in this permit mean the version of 40 CFR which is effective as of the effective date of this permit.

32. AVAILABILITY OF PUBLIC SEWERS

Notwithstanding the issuance or non-issuance of an NPDES permit to a semi-public disposal system, whenever the sewage system of a publicly owned treatment works becomes available and accessible, the permittee operating any semi-public disposal system shall abandon the semi-public disposal system and connect it into the publicly owned treatment works.

**PART VII – Production Area Monitoring and Inspections and Land Application Requirements****General**

The permittee's approved manure management (MMP) plan shall be developed and implemented in accordance with the best management practices contained within this permit.

**PRODUCTION AREA REQUIREMENTS**Table 1. Monitoring/Inspection Requirements

Action	Frequency	Record Keeping Requirements
Grab samples shall be taken of all discharges from the production area. Clean storm water that has been diverted does not need to be sampled.	Each time they occur	Date and time of sample, results of analysis, and the information required in Part III, 5 and 6. See Part I, A, 1, e.
All discharges from the production area and land application area shall be recorded in the operating record.	Each time they occur	Cause, volume, and duration of discharge and any corrective actions needed and the dates those actions were taken. See Part I, A, 1, e and Part I, A, 2, d.
In accordance with Part VII, B, 5 of this permit, grab samples shall be taken of discharges from land application areas where manure was applied on frozen and/or snow covered ground.	Each time they occur	Date and time of sample, results of analysis, and the information required in Part III, 5 and 6. See Part VII, B, 5.
Representative samples of the manure to be land applied shall be taken from each source (e.g., each lagoon, storage tank, or permanent stockpile area must be sampled).	1/year	The information required in PART III, 5 and 6. See Part VII, A, 2. (See note below.)
Representative soil samples of the manure land application fields.	Every 3 years	The information required in Part III, 5 and 6. See Part VII, A, 3. (See note below.)
Monitor operating level of all manure storage or treatment facilities.	1/week	Date and time of observation, manure level in each structure. See Part II, E. (See note below.)
Inspect manure storage or treatment facilities, including devices channeling contaminated storm water to the manure storage or treatment facility for evidence of erosion, leakage, animal damage, overflow, or discharge.	1/week	Date and time of inspection, structural integrity, vegetation condition, and any corrective actions needed and the dates those actions were taken. (See note below.)
Inspect storm water diversion devices or runoff diversion structures.	1/week	Date and time of inspection, observations of flow quantity and color, structural integrity (e.g. signs of cracks, sparse or stressed vegetation, erosion, etc.), any corrective actions needed and the dates those actions were taken.
Inspect drinking and cooling water lines that are located above ground, readily visible or accessible for daily inspections.	Daily	Date and time of inspection, number of leaks, any corrective actions needed and the dates those actions were taken.
Monitor forecast at the CAFO location.	Every land application event	Date, weather conditions (including percentage chance of rain) 24 hours prior to application, at the time of application, and 24 hours after application. See Part VII, A, 5 and Part VII, B, 2, e.
Inspect land application fields.	In accordance with MMP	Date and signs of discharge or runoff into surface waters and/or conduits to surface waters of the State.
Inspect land application equipment.	In accordance with MMP	List of equipment, date of inspections, corrective actions, calibration dates. (See note below.)



Note: Much of this information is required in the operating record for the Review Compliance Certificate or Permit to Operate issued by the Director of ODA. The operating record form provided by ODA is an acceptable format for maintaining records for the purposes of complying with this permit as well. However, make sure that additional records required by this permit are added to those record keeping forms.

1. Any deficiencies found as a result of these inspections must be corrected as soon as possible. Deficiencies not corrected within 30 days must be accompanied by an explanation of the factors preventing immediate correction.
2. Records of mortalities management and practices used by the CAFO shall be maintained to ensure compliance with Part I, A, 1, f.
3. Records documenting the current design of any manure storage structures, including volume for solids accumulation, design treatment volume, total design volume, and approximate number of days of storage capacity must be maintained at the CAFO.

## **LAND APPLICATION REQUIREMENTS**

### **A. CONTENTS OF THE MMP**

1. **Nutrient Budget:** The manure management plan shall include a total nutrient budget for the operation, based on 1) targeted crop yields based on actual crop yields, 2) soil productivity information; 3) historical yield data, 4) realistic potential yield, or 5) combinations of yield data. The plan shall consider all potential sources of nutrients including quantity of manure and manure nutrients, organic by-products, wastewater, commercial fertilizer, crop residues, legume credits, and irrigation water and a summary of the total acres of land to be used for land application.
2. **Manure Characterization:** At a minimum, manure from each manure storage or treatment facility shall be analyzed annually for the following: total nitrogen, ammonium nitrogen, organic nitrogen, phosphorus, potassium, and percent total solids. Procedures for the collection and analysis of the samples shall be in accordance with Publication A3769, "Recommended Methods of Manure Analysis; Published by the Board of Regents of the University of Wisconsin System, University of Wisconsin-Extension".
3. **Soil Characterization:** At a minimum, soil samples shall be taken to a uniform depth and the fertility analysis shall include: pH, phosphorus, potassium, calcium, magnesium and cation exchange capacity.
  - a. Soil fertility analysis shall be conducted in accordance with Publication 221, "Recommended Chemical Soil Test Procedures for the North Central Region; Published by the North Central Regional Committee on Soil Testing and Plant Analysis (NCR-13), North Dakota Agricultural Experiment Station". See Part VII, A, 3, e, below.
  - b. Sample shall be representative of a land application site with one composite soil sample representing no more than twenty-five acres or one composite soil sample for each land application site, whichever is less. A sample depth of 8 inches shall be used unless justified otherwise in the plan.
  - c. The manure management plan shall specify the soil sampling frequency in accordance with the following requirements:
    - (1) A site that receives manure shall be soil tested, at a minimum, once every three years.

(2) For any land application site used by the owner or operator the land application site shall be sampled at least six months following application.

- d. Results of the soil sampling events shall be recorded and shall include the location of the soil sample collection site, the depth of the sample collected and the analysis.
- e. In developing appropriate manure application rates for land application methods, the owner or operator shall use the Bray P1 soil test level or equivalent appropriate phosphorus soil test, (Mehlich III, Olsen, Phosphorus Retention Test). The owner or operator shall choose a phosphorus soil test method and identify the selected method in the manure management plan.

#### 4. Land Application Methods – Methodology for Determining Manure Application Rates

- a. Determine if the land application site has soils that are prone to flooding and when the expected flooding seasons are according to Table 3. For timing restrictions, see Part VII, B, 2, c.
- b. The manure application rate shall be based on the land application site's soil tests that are no older than three years. See Part VII, A, 3, above.
- c. The manure application rate shall be based on the most current manure test results. The manure test results expressed as a nutrient percentage shall be converted into either pounds per ton of dry manure or pounds per one thousand gallons of liquid manure.
- d. Determine if a solid or liquid manure application will be performed. The manure application rate shall be based on the most limiting factor (i.e., most restrictive factor for the purpose of protecting surface water quality) of the following:

(1) For liquid manure (less than 20% solids):

- i. The crop nitrogen requirements or removal expressed in thousands of gallons of manure per acre, as determined in accordance with g., below;
- ii. The crop phosphorus requirements or removal expressed in thousands of gallons of manure per acre, as determined in accordance with h., below;
- iii. The restrictions on the volume of liquid manure application, in accordance with Part VII, B and Part VII, C, Tables 21 and 22, with volume expressed as a measure of gallons per acre or inches per acre, with twenty seven thousand two hundred gallons equal to one acre/inch;
- iv. The application rate shall not exceed the available water capacity in the upper eight inches of the soil for both subsurface and nonsubsurface drained sites in accordance with Part VII, C, Table 4; and
- v. The application rate shall be adjusted to preclude surface ponding and/or runoff from a land application site. See Part VII, B, 2.

(2) For solid manure (greater than or equal to 20% solids):

- i. Either the crop nitrogen requirements or removal of nitrogen expressed in pounds per ton of dry manure per acre, as determined in accordance with g., below;

- ii. The crop phosphorus requirements or removal expressed in pounds per ton of dry manure per acre, as determined in accordance with h., below; or
  - iii. The restrictions on the volume of solid manure applied, taken from Part VII, B and Part VII, C, Tables 21 and 22, with volume expressed as a measure of tons/acre.
- e. Determine if solid manure will be stockpiled at the land application site. Stockpiles shall meet the setbacks in Part VII, B, Table 2.
- f. For liquid manure applications, determine restrictions based on Part VII, C, Table 4 Available Water Capacity and Tables 21 and 22 Most Limiting Manure Application Rates (for Tiled Fields and Non-Tiled Fields). For solid manures, determine restrictions based on Part VII, C, Tables 21 and 22 Most Limiting Manure Application Rates Charts (for Tiled Fields and Non-Tiled Fields).
- g. The manure application rate for nitrogen shall be the most restrictive value (i.e., most restrictive factor for the purpose of protecting surface water quality) determined after considering the following:
  - (1) The application rate for nitrogen shall be based on utilization of crops at the recommended agronomic rates (using the Ohio Agronomy Guide, OSU Bulletin 472) and based on minimum runoff and leaching to waters of the state, as determined in accordance with (3) below.
  - (2) In determining the agronomic rate for nitrogen, the owner or operator shall do the following:
    - i. Determine the nitrogen requirements (based on Part VII, C, Tables 6, 7, and 8) or removal rates (based on Part VII, C, Table 5) for a realistic yield goal of planned crops; Determine the nutrient removal for the expected cropping sequence using Part VII, C, Table 5 Nutrient removed in Harvested Portions of Crops. Determine residual nitrogen credits for the expected cropping sequence using Part VII, C, Table 8 Residual Nitrogen Credits Based on Previous Crops.
    - ii. Subtract the nitrogen credit to be given to the next crop in accordance with values for previous crops, subtract credits for crop residues and legumes grown in previous years, and subtract nitrogen that will be added in other forms including commercial fertilizer and organic by-products (see Part VII, C, Table 8); and
    - iii. When applying nitrogen to a grass or legume cover crop that is growing or being established immediately after manure application, manure can be applied at the recommended nitrogen rate (using the Ohio Agronomy Guide, OSU Bulletin 472) for the next non-legume crop or the nitrogen removal rate for the next legume crop.
  - (3) In determining how to minimize nitrogen leaching to waters of the state, the owner or operator shall do the following:
    - i. Assess each land application site with the Ohio nitrogen leaching risk assessment procedure in Part VII, C; and
    - ii. If the nitrogen leaching risk assessment procedure completed in accordance with i above, demonstrates that the land application site has a high nitrogen leaching potential and no growing cover crop, then application of manure shall be limited to fifty

pounds per acre as applied nitrogen calculated at the time of application (by adding ammonia-nitrogen to one third of organic nitrogen) from June to October first.

- (4) Use the current manure analysis and the relevant sections of the following tables in Part VII, C to determine the amount of manure nutrient available for crop production: Table 10 Calculating Available Nitrogen of Manure, Table 11 Nitrogen Sufficiency ranges for Corn, Soybeans, Alfalfa and Wheat, and Table 12 Sidedress N Fertilizer Rates for Corn.
  - (5) When using legumes as a nitrogen removal source, the maximum legume nitrogen removal must be less than or equal to one hundred and fifty pounds per acre.
- h. The manure application rate for phosphorus shall be the most restrictive value (i.e., most restrictive factor for the purpose of protecting surface water quality) determined after considering the following:
- (1) The application rate for phosphate applications shall be based on the following:
    - i. Estimated plant uptake by crops at the recommended agronomic rates (using the Ohio Agronomy Guide, OSU Bulletin 472);
    - ii. Soil test analysis;
    - iii. Subsequent phosphorus removal in plant biomass (see Part VII, C, Table 5); and
    - iv. Minimum runoff to waters of the State.
  - (2) In determining the agronomic rate for phosphate application, the owner or operator shall do the following:
    - i. Determine the phosphorus requirements for a realistic yield goal of planned crops and/or crop rotations (see Part VII, C, Tables 13, 14, 15, 16, and 17);
    - ii. Subtract phosphorus that will be added in other forms including commercial fertilizer and organic by-products; and
    - iii. The application rate for phosphorus shall not exceed the removal rates for a realistic yield goal of planned crops, unless following the procedures in h, (3) below.
  - (3) In determining how to minimize phosphorus runoff to waters of the State, the owner or operator shall do the following:
    - i. Prior to the land application of manure, a land application site shall be assessed with either the phosphorus index risk assessment procedure or the phosphorus soil test risk assessment procedure in Part VII, C. This risk assessment shall be used in the determination of manure application rates and the results shall be documented as required in Part VII, A, 5. Use the phosphorus index risk assessment procedure if the Bray P1 value of the soil test is over one hundred and fifty parts per million. The phosphorus index risk assessment procedure shall only be relied upon for a transitional period of time to allow the owner or operator an opportunity to find other fields or other methods to distribute nutrients from the facility in order to achieve less than one hundred and fifty parts per million Bray P1 soil test method;

- ii. There shall be no multi-year phosphorus applications on fields where either the phosphorus index risk assessment procedure produces a high rating or the phosphorus soil test risk assessment procedure produces a high potential rating. There shall be no phosphorus applications on fields where either the phosphorus index risk assessment procedure produces a very high rating or the phosphorus soil test risk assessment procedure produces a very high potential rating; and
  - iii. Phosphate manure application rates above two hundred and fifty pounds per acre are not recommended. However, if phosphate concentrations in liquid manure exceed sixty pounds of phosphate per one thousand gallons or eighty pounds phosphate per ton for solid manure, rates higher than two hundred and fifty pounds per acre may need to be applied due to limitations of the application equipment. In no case shall manure application exceed the rates specified in Part VII, A, 4, g and Part VII, A, 4, h, (3), ii. In no case shall phosphate applications exceed five hundred pounds per acre of phosphate during one year. When phosphate applications exceed two hundred and fifty pounds per acre the following additional criteria applies:
    - Phosphate applications exceeding two hundred and fifty pounds per acre in any one year shall not be applied on fields with a phosphorus soil test exceeding 100 ppm Bray P1 or equivalent, results of a phosphorus index risk assessment procedure notwithstanding.
    - The manure shall be immediately injected or incorporated 3 to 5 inches deep.
    - The manure shall not be applied on either frozen or snow covered ground.
    - There shall be no further phosphate applications for a minimum of three years on land with a phosphorus soil test level below 40 ppm (80 pounds per acre) Bray P1 or equivalent and no additional phosphate applications for a minimum of five years on land with a phosphorus soil test level above 40 ppm (80 pounds per acre) Bray P1 or equivalent.
  - i. A comparison shall be made of all the manure land application requirements. The selected rate shall be documented in accordance with the record keeping requirements in Part VII, A, 5.
5. Record Keeping Requirements: At a minimum, the following records must be kept by the permittee:
- a. Expected crop yields.
  - b. The date(s) manure is applied to each field.
  - c. Weather conditions at the time of application and for 24 hours prior to and following application. See Part VII, B, 2, e.
  - d. Test methods used to sample and analyze manure and soil.
  - e. Results from manure and soil sampling.
  - f. Explanation of the basis for determining manure application rates, as provided by Part VII, A, 4.
  - g. Calculations showing the total nitrogen and phosphorus to be applied to each field, including sources other than manure.

- h. Total amount of nitrogen and phosphorus actually applied to each field, including documentation of calculations for the total amount applied.
- i. The method used to apply the manure.
- j. Date(s) of manure application equipment inspection.

**B. LAND APPLICATION RESTRICTIONS (Effective beginning on the date that coverage under this permit is granted.)**

1. Land application of manure shall be conducted in accordance with the following:

Table 2. Manure Application Rate Restrictions

<b>Manure Application Distance Restrictions and, Where Appropriate, Rate Restrictions For the Following Items</b>	
Streams, Lakes, Ponds, Watercourses, Other Surface Water, Waterways, Open Tile Line Intake Structures, or Other Conduits to Surface Waters	Manure shall not be applied closer than 100 feet, unless a 35-foot vegetated buffer has been established where manure application is prohibited. A mandatory 35-foot vegetated buffer must be established along fields with perennial streams regardless of setback requirement.
Public Drinking Water Surface Water Intakes	Land Application shall not take place within the emergency management zone of a public water system using surface water. Otherwise, manure shall not be applied closer than 300 feet from the edge of the field.
Seasonal Salmonid and Cold Water Habitats	Manure shall not be applied closer than 100 feet, unless a 35-foot vegetated buffer has been established where manure application is prohibited.
Public Drinking Water Wells	Land application shall not take place within a highly susceptible drinking water source protection area (as defined by Ohio EPA) for a community public water system using ground water and not within the inner management zone for all other community public water systems using ground water.
	Land application shall not take place within the inner management zone of a drinking water source protection area or within 300 feet of a water supply well serving a transient non-community or non-community, non-transient public water system using ground water, whichever distance is greater.
Private Drinking Water Wells	For injection application and surface application followed by incorporation within 24 hours, manure shall not be applied closer than 100 feet.
	For surface application not followed by incorporation within 24 hours, manure shall not be applied closer than 300 feet.
Class V Agricultural Drainage Wells, Agricultural Wellheads, Abandoned or Uncapped Oil Wells, or Sinkholes	For injection application and surface application followed by incorporation within 24 hours, manure shall not be applied closer than 100 feet.
	For surface application not followed by incorporation within 24 hours, manure shall not be applied closer than 300 feet.
Springs	Manure shall not be applied closer than 300 feet.
Slope	For fields with a slope less than 15%, surface application can be used when yearly average soil loss is less than five tons per acre or "T", whichever is less.



Manure shall not be applied to cropland over 15% slope or to pasture/hay land over 20% slope unless one of the following precautions are taken:

- a. Immediate incorporation or injection with operations done on the contour, unless the field has 80% ground cover (residue or canopy);
- b. Applications are timed during periods of lower runoff and/or rainfall (May 20 to October 15);
- c. Split applications are made (separated by rainfall events) with single applications not exceeding 5000 gallons per acre for liquid manure or 10 wet tons per acre for solid manure;
- d. The field is established and managed in contour strips with alternated strips in grass or legume.

**Stockpiling of Manure**

Streams, Lakes, Ponds, Watercourses, Waterways, Open Tile Line Intake Structures, or Other Conduits to Surface Waters, minimum 300 feet. (Stockpiling within waterways or concentrated flow areas is prohibited.)

Public and Private Wells/Springs, minimum 300 feet.

Flooding/flood plains/floodways, prohibited.

Public drinking water surface intakes, minimum 1500 feet.

Class V agricultural drainage wells and sinkholes, minimum 300 feet.

Slope, 0-6% only.

**2. Timing/Site Restrictions:**

- a. Prior to land applying manure, the permittee shall inspect the land application area to determine the suitability of the site for land application (considerations shall include tile location and depth, soil type, evidence of soil cracking, available water capacity of the soil, crop maturity, prior precipitation, forecasted precipitation, etc.) and document field conditions at the time of the inspection. See Part VII, A, 5. Broken tiles or blow out holes shall be repaired prior to land application.
- b. For fields with soil cracks greater than six inches deep, the soil must be tilled before the land application of liquid manure or the application must be delayed until the cracks are sealed. However, liquid manure applications may be made on tiled fields with growing crops if the application rate is less than or equal to a quarter of an inch or six thousand seven hundred gallons per acre and tile plugs are used or tile stops closed prior to application. See Part VII, B, 3 below.
- c. For fields that are prone to flooding, floodplains, or floodways, manure must be injected or incorporated within 24 hours of application. No manure application shall occur during periods of expected flooding. See USDA, NRCS Field Office Technical Guide.
- d. Land application of manure shall not cause ponding or runoff. For liquid manure applications, the land application shall not exceed the available water capacity in the upper eight inches of the soil in the application field.
- e. Land application shall not occur on saturated soils or during rain or runoff events, and shall not occur if the forecast contains a greater than fifty per cent chance of precipitation as determined in "Managing Manure Nutrients at Concentrated Animal Feeding Operations, Appendix M, United States Environmental Protection Agency, EPA-821-B-04-006, August 2004," exceeding an amount of one-quarter inch for hydrologic soil group D soils and one-half inch for hydrologic soil group A, B, and C soils, for a period extending twenty-four hours after the start of land application. Record weather conditions in the operating record for conditions at the time of



application and for twenty-four hours prior to and following application. For determining hydrologic soil groups, refer to USDA-NRCS Engineering Field Manual, Chapter 2 – Ohio Supplement (1989), Table 2.1, pages 2-42 through 2-83.

- f. If solid manure is applied on conventionally tilled bare soil, the manure shall be incorporated into the soil within two days after application on the land. This requirement does not apply to no-till fields, pasture, or fields where crops are actively growing.
  - g. Manure application shall not take place on fields where soil loss exceeds "T" (Tolerable Soil Loss, See USDA, NRCS Field Office Technical Guide).
3. For land application sites with subsurface tile drainage, the permittee shall visually monitor all field tile outlets before, during and after application of manure to the site and record the results of that monitoring. The permittee shall have access to or methods/devices to stop or capture subsurface drain flow. If manure reaches the subsurface drain outlet to waters of the State, the application of manure shall cease and the flow stopped or captured. If land application has caused manure laden water to be discharged from a field tile, Ohio EPA shall be notified by calling 1-800-282-9378 as soon as possible, but in no case later than 24 hours following first knowledge of the occurrence. See Part I, A, 2, d.
4. For the land application of liquid manure to sites with subsurface tile drainage, the following criteria must be followed:
- a. Application rates shall be less than or equal to half an inch or thirteen thousand gallons per acre per application event;
  - b. A tool shall be used that can disrupt and/or close the preferential flow paths in the soil using horizontal fracturing, or the surface of the soil shall be tilled three to five inches deep to a seedbed condition to soak up the liquid manure and keep it out of preferential flow channels;
  - c. If injection is used, manure shall only be injected deep enough to cover manure with soil. The soil shall be tilled at least three inches below the depth of injection prior to application; and
  - d. For fields with growing crops or continuous no till fields where tillage is not an option, all tile outlets from the application area are to be plugged/tile stops closed prior to application.
5. Manure shall be managed in such a manner to prevent land application on frozen or snow covered ground. Every attempt shall be made by the permittee to avoid land application during the frozen or snow covered ground conditions because of lack of agronomic benefit and high risk of pollution of surface waters. As stated in Part II, failure to take appropriate action to avoid land application on frozen and/or snow covered ground is a violation of this permit and subject to enforcement. The nutrients in the manure applied on frozen and/or snow covered ground shall be included in the manure application rate calculations for the next crop.

If practical, manure should be injected and/or incorporated within 24 hours to minimize surface manure runoff. Where manure is not injected or incorporated within 24 hours, the following frozen and/or snow covered ground restrictions are mandatory.

Other locations for manure disposal shall be investigated prior to the land application (i.e., transfer of manure to another waste treatment or storage facility, wastewater treatment plant, rental or acquisition of a storage tank, etc.).

Stockpiling of solid manure, in accordance with this permit, shall be utilized rather than spreading on the field.

Only limited quantities of manure shall be applied to address manure storage limitations until non-frozen or non-snow covered soils are available for manure application.

Records must be maintained for all instances of application on frozen or snow covered ground that include: date, amount applied, location, acres applied to, weather and soil conditions including depth of snow cover, surface residue cover, and reason for applying manure at that time.

In addition to all of the above land application restrictions (restrictions on fields prone to flooding, not causing ponding or runoff, restrictions on saturated soils, and requirements for tilled fields), the following criteria must also be met for surface manure application on frozen or snow covered ground per application event per field per winter season:

- a. The field must have greater than or equal to ninety percent surface residue cover at the time of application, and vegetation/residue shall not be completely covered by ice and/or snow at the time of application;
- b. The maximum manure application rate is five thousand gallons per acre for liquid manure, ten wet tons per acre for solid manure with more than fifty percent moisture, and five wet tons per acre for solid manure with less than fifty percent moisture. Depending on soil hydrologic group and surface residue cover, the liquid manure application rate on frozen soils may need to be lowered to prevent manure ponding or runoff;
- c. Manure shall not be applied on more than twenty contiguous acres. Contiguous areas for application are to be separated by a break of at least two hundred feet. Areas used for application are to be the furthest from surface waters and present the least potential for runoff;
- d. Setbacks from surface waters and conduits to surface waters (including grassed waterways and surface drains) must be a minimum of two hundred feet. This setback shall also have at least 90 percent surface residue cover, and vegetation/residue shall not be completely covered by ice and/or snow at the time of application. This distance may need to be further increased due to local conditions and other setback restrictions in Part VII, B, 1;
- e. For fields with slopes greater than six percent, manure shall be applied in alternating strips sixty to two hundred feet wide generally on the contour, or in the case that the field is managed in contour strips with alternative strips in grass or legume, manure shall only be applied on alternative strips. Note that the application rate shall be determined for each separate application strip area, not area of entire field;
- f. Manure phosphate applications exceeding two hundred and fifty pounds per acre are prohibited.

If the permittee surface applies manure on frozen or snow covered ground, concentrated field surface drainage and tile outlets shall be visually monitored at the conclusion of the manure application, and periodically afterwards when weather is likely to produce manure runoff including when temperatures rise, snow melts, and in conjunction with rainfall, etc., until the manure has been assimilated into the field and is no longer likely to discharge into waters of the State. If the land applied manure discharges to waters of the State, then the permittee shall notify Ohio EPA within two hours of detection of the runoff event. In accordance with Part I, A of this permit, a discharge of manure to waters of the State from land application on frozen and/or snow covered ground that is not the result of a precipitation event is prohibited and a violation of the permit.

If the ammonia nitrogen level in a water quality sample is determined to be 26 mg/L or greater in the discharge at the point it enters waters of the State, then any additional surface application of manure to frozen and/or snow covered ground is prohibited on the field where the runoff event occurred. In the event that the permittee follows the permit requirements and runoff from frozen or snow covered fields discharges to waters of the State with an ammonia nitrogen content of 26 mg/L or greater in a total of three surface land application events, then surface application of manure on any frozen and/or snow covered ground is prohibited for that permittee from that point on.

In the event that a permittee fails to comply with the land application requirements for frozen or snow covered ground (including notification of discharges, monitoring and record keeping requirements) more than two times, then land application on any frozen or snow covered ground will be prohibited for that permittee upon receipt of the third notice of violation by Ohio EPA.

In addition to the visual monitoring and reporting requirements stated above, the permittee shall collect representative grab samples from discharges of land applied manure into waters of the State at the point that the discharge enters waters of the State (i.e., concentrated field surface runoff or field tile outlet discharge prior to entrance to surface water) and have the sample analyzed for, at a minimum, the following parameter:

00610 – Nitrogen, Ammonia (NH<sub>3</sub>) – mg/L

The permittee shall: (a) collect the sample within 30 minutes of the first knowledge of the discharge; or (b) if the sampling in that period is inappropriate due to dangerous weather conditions, collect the sample as soon as possible after suitable conditions occur, and document the reason for delay.

The permittee shall report the results of the discharge sample(s) to Ohio EPA, Central Office, Division of Surface Water, within 14 days of occurrence. The report shall, at a minimum, contain the sample results, describe the reason for the discharge, the location, estimate of quantity and duration of the discharge, and duration of the precipitation leading up to the event, as well as any measures taken to clean up and eliminate the discharge and required land application records stated above. Laboratory results not available at the time of the report submittal shall be submitted to Ohio EPA within five days of receipt.

6. The permittee is responsible for complying with this permit for land application activities conducted on each site where the permittee, or anyone employed by the permittee, owns, operates, or land applies manure generated from the CAFO or determines timing and amount of manure to be applied on fields not otherwise owned, rented, or leased by the CAFO.

#### C. Tables and Procedures for Manure Application Rate Determination

Note: Much of the information contained in this section is consistent with ODA rule in OAC 901:10-2-14 and associated appendices.

Table 3. Soils Prone to Flooding

Soils Prone to Flooding	Months	Comment	Soils Prone to Flooding	Months	Comment
Abscota Variant	Feb-Jun		Medway Variant	Nov-May	
Adrian	Nov-May		Medway, limestone substratum	Nov-Dec	
Aetna	Dec-Jun		Melvin	Sep-May	Frequently flooded, long

Soils Prone to Flooding	Months	Comment	Soils Prone to Flooding	Months	Comment
					duration
Algansee	Nov-May		Melvin	Dec-May	
Algiers	Dec-Jun	Frequently flooded	Mentor	Jan-Dec	
Alluvial land	Nov-Dec	Occasionally flooded	Millgrove	Nov-Jun	
Alluvial land	Jan-Dec	Long duration	Montgomery	Nov-May	
Ashton	Dec-May	Very long duration	Moshannon	Dec-May	
Beaucoup	Mar-Jun		Muskego	Nov-May	
Bonnie	Oct-Jun		Newark	Dec-Apr	
Brookston	Dec-May		Newark Variant	Jan-Apr	
Carlisle	Nov-May		Nolin	Feb-May	
Ceresco	Mar-May		Nolin Variant	Feb-Apr	
Chagrin	Nov-May		Olentangy	Nov-Dec	
Chavies	Nov-Mar		Orrville	Nov-May	
Clifty	Nov-May		Otego	Nov-Dec	
Coblen	Nov-Jun		Papakating	Nov-Jun	
Cohoctah	Nov-Apr		Patton	Jan-Dec	
Cuba	Jan-May		Peoga	Jan-Dec	
Defiance	Jan-May		Pewamo	Mar-Apr	
Edwards	Sep-May		Philo	Dec-May	
Eel	Oct-Jun		Piopolis	Mar-Jun	
Eel Variant	Jan-May		Pope	Nov-Apr	
Elkinsville	Jan-Dec		Rockmill	Sep-Jun	
Euclid	Dec-Jun		Romeo	Mar-Jun	
Fitchville	Dec-Jun		Ross	Nov-Jun	
Flatrock	Dec-Apr		Rosburg	Nov-Jun	
Flatrock, limestone substratum	Nov-Apr		Sarahsville	Dec-May	
Fluvaquents	Nov-Jun		Saranac	Nov-May	
Genesee	Oct-May		Scioto	Nov-Jun	
Genesee Variant	Jan-May		Sebring	Nov-Jun	Occasionally flooded
Gessie	Oct-May		Senecaville	Dec-Apr	
Glendora	Jan-Dec		Shoals	Oct-Jun	
Grigsby	Dec-Apr		Shoals Variant	Nov-May	Used in Miami, Putnam, and Richland Counties
Hackers	Jan-Apr		Shoals Variant	Oct-Jun	Used in Champaign County
Harrod	Nov-Jun		Shoals, Till Substratum	Nov-Dec	
Hartshorn	Nov-May		Skidmore	Dec-May	
Haymond	Dec-May		Sligo	Mar-Apr	
Holly	Sep-May	Frequently flooded, very long duration	Sloan	Nov-Jun	
Holly	Nov-May		Sloan, Till Substratum	Nov-Dec	
Holton	Dec-Jun		Stanhope	Nov-Dec	
Huntington	Dec-May		Stendal	Jan-May	
Joliet	Apr-Jun		Stone	Nov-Jun	
Jules	Mar-Jun		Stonelick	Nov-Jun	
Kerston	Mar-May		Stringley	Nov-Jun	
Killbuck	Jan-Dec		Taggart	Jan-Dec	
Kinn	Dec-Apr		Tioga	Nov-May	
Knoxdale	Dec-Apr		Tioga Variant	Jan-Apr	
Kyger	Nov-May		Toledo	Nov-May	
Landes	Jan-Jun		Tremont	Jan-Dec	
Landes Variant	Nov-Jun		Wabash	Nov-May	
Lanier	Nov-Jun		Wabasha	Sep-Jun	
Latty	Jan-May		Wakeland	Jan-May	

Soils Prone to Flooding	Months	Comment	Soils Prone to Flooding	Months	Comment
Lenawee	Mar-May		Wallkill	Sep-Jun	
Lindside	Dec-Apr		Wappinger	Jan-Dec	
Linwood	Nov-Jun		Warsaw Variant	Jan-May	
Lobdell	Jan-Apr	Frequently flooded	Wayland	Nov-Jun	
Lobdell	Nov-Apr		Wick	Oct-Jun	
Martinsville	Jan-Apr		Wilbur	Oct-Jun	
Martisco	Mar-Jun		Willette	Nov-Dec	
McGary Variant	Jan-Dec		Seperick	Nov-Jun	
Medway	Nov-Jun		Zipp	Dec-May	

### Available Water Capacity (AWC)

This table shall be used to determine the AWC at the time of application and the liquid volume in gallons that can be applied not to exceed the AWC. To determine the AWC in the upper 8 inches use a soil probe or similar device to evaluate the soils to a depth of 8 inches. For land application, liquid manure application may also be calculated by converting acres per inch to gallons per acre. This conversion is based on the following formula: 1 acre – inch equals 27,156 gallons per acre.

Table 4. Available Water Capacity

Available Moisture in the Soil	Sands, Loamy Sands	Sandy Loam, Fine Sandy Loam	Very Fine Sandy Loam, Loam, Silt Loam, Silty Clay Loam	Sandy Clay, Silty Clay, Clay, Fine & Very Fine Textured Soils
<25% Soils Moisture	Dry, loose and single-grained; flows through fingers.	Dry and loose; flows through fingers.	Powdery dry; in some places slightly crushed but breaks down easily into powder.	Hard, baked and cracked; has loose crumbs on surface in some places.
Amount to Reach AWC	20,000 gal/ac	27,000 gal/acre	40,000 gal/acre	27,000 gal/acre
25-50% or Less Soil Moisture	Appears to be dry; does not form a ball under pressure.	Appears to be dry; does not form a ball under pressure.	Somewhat crumbly but holds together under pressure.	Somewhat pliable; balls under pressure.
Amount to Reach AWC	15,000 gal/acre	20,000 gal/acre	30,000 gal/acre	20,000 gal/acre
50-75% Soil Moisture	Appears to be dry; does not form a ball under pressure.	Balls under pressure but seldom holds together.	Forms a ball under pressure; somewhat plastic; slicks slightly under pressure.	Forms a ball; ribbons out between thumb and forefinger.
Amount to Reach AWC	10,000 gal/acre	13,000 gal/acre	20,000 gal/acre	13,000 gal/acre
75% to Field Capacity	Sticks together slightly; may form a weak ball under pressure.	Forms a weak ball that breaks easily, does not stick.	Forms ball; very pliable; slicks readily if relatively high in clay.	Ribbons out between fingers easily; has a slick feeling.
Amount to Reach AWC	5,000 gal/acre	7,000 gal/acre	11,000 gal/acre	7,000 gal/acre
100% Field Capacity	On squeezing, no free water appears on soil, but wet outline of ball on hand.	On squeezing, no free water appears on soil, but wet outline of ball on hand.	On squeezing, no free water appears on soil, but wet outline of ball on hand.	On squeezing, no free water appears on soil, but wet outline of ball on hand.
Above Field Capacity	Free water appears when soil is bounced in hand.	Free water is released with kneading.	Free water can be squeezed out.	Puddles; free water forms on surface.

NOTE: Liquid manure applications to tiled fields must be less than or equal to 13,576 gal/acre.

**Table 5. Nutrients Removed in Harvested Portions of Crops**

Crop (Yield)	Nutrients Removed For Given Yields <sup>a</sup>			Nutrients Removed for Unit Yields <sup>b</sup>	
	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
	Pound/Acre			Pound/Bushel or Ton	
Alfalfa (6 T)	340 <sup>c</sup>	80	360	13.3 lb/T	60 lb/T
Corn (150 Bu)					
Grain	135	55	40	0.37 lb/bu	0.27 lb/bu
Stover	100	25	160		
Corn-Silage (26 T)	235	80	235	3.1 lb/T	9.0 lb/T
Grass – Cool season (3.5 T), Tall grasses and/or Forage legumes (established)	140	45	175	13.0 lb/T	60.0 lb/T
Oats (100 Bu)					
Grain	65	25	20	0.25 lb/bu	0.20 lb/bu
Straw	35	15	100	0.15 lb/bu	1.0 lb/bu
Sorghum-grain (7,600 lb)					
Grain	105	30	30	0.39 lb/100 lb	0.39 lb/100 lb
Stover	80	50	230		
Soybean (50 Bu)	190 <sup>c</sup>	40	70	0.80 lb/bu	1.4 lb/bu
Sugar Beets – roots (25 T)	100	50	250	2.0 lb/T	10.0 lb/T
Tobacco – Burley and Cigar filler					
Leaf (3000 lb)	105	25	185		
Stems and Suckers (2000 lb)	55	15	65		
Leaves and Stalks				1.3 lb/100 lb	8.3 lb/100 lb
Wheat (55 Bu)					
Grain	70	35	20	0.64 lb/bu	0.36 lb/bu
Straw	30	5	50	0.90 lb/bu	0.91 lb/bu

<sup>a</sup>Source: National Plant Food Institute and others.<sup>b</sup>Source: Ohio Agronomy Guide, 12<sup>th</sup> Edition.<sup>c</sup>Inculated legumes fix nitrogen from the air.**Table 6. Nitrogen Rates<sup>a</sup> for Corn Based on Yield Potential**

Corn Yield Potential (bu/acre)						
Previous Crop	80	100	120	140	160	180+
Corn, small grains	80	110	140	160	190	220

<sup>a</sup>N fertilizer rates are based on the following relationship:

$$N \text{ (lb/acre)} = -27 + (1.36 * \text{yield potential}) - N \text{ credit or } 110 + [1.36 * (\text{yield potential} - 100)] - N \text{ credit}$$

**Table 7. Nitrogen Rates for Wheat Based on Yield Potential**

Yield Potential (bu/acre)	Nitrogen Rate (Pounds N to Apply/acre)
50	40
70	75
90+	110

1. N rate is based on the following relationship:

$$N \text{ (lb/acre)} = 40 + [1.75 * (\text{yield potential} - 50)]$$

2. No nitrogen credits are made based on previous crop.



**Table 8. Residual Nitrogen Credits Based on Previous Crop**

Previous Crop	Nitrogen Credits
	Pounds of N
Corn, small grains	0
Soybeans	30
Grass sod	40
Established forage legume	
Average stand (3 plants/ft <sup>2</sup> )	0
Good stand (5 plants/ft <sup>2</sup> )	0
Annual legume cover crop	30

<sup>a</sup>N credits for established forage legume = 40 + 20 \* (plants/to maximum of 140/ft<sup>2</sup>)

### Ohio Nitrogen Leaching Assessment Procedure

Soils are classified as having a high, medium or low nitrogen leaching potential with relative index ratings from 0 - 10+ for their potential to leach nitrates below the root zone. The leaching potential is rated as high, medium or low by combining the soil's hydrologic soil grouping (A, B, C or D), the local county's annual rainfall, and the local county's season rainfall (October 1 to March 1).

To determine the soil's nitrogen leaching potential, use the following procedure:

1. Determine the soils hydrological soil grouping – A, B, C or D. For this information, refer to USDA-NRCS Engineering Field Manual, Chapter 2 – Ohio Supplement (1989), Table 2.1, pages 2-42 through 2-83.
2. Determine the local county's annual rainfall and the local county's season rainfall (October 1 to March 1). For this information, refer to USDA-NRCS Engineering Field Manual, Chapter 2 – Ohio Supplement (1989), Exhibit OH2-3, Supplement pages 1 through 4 and USDA-NRCS Engineering Field Manual, Chapter 2 – Ohio Supplement (1989), Exhibit OH2-1 and Sheets 1 through 3.
3. Refer to Table 9 below for the respective county to determine the soils relative leaching index rating.
  - (a) Soils with a rating of 0-2 have a low potential to leach nitrates below the root zone.
  - (b) Soils with a rating of 3-10 have a medium potential to leach nitrates below the root zone.
  - (c) Soils with a rating of 10+ have a high potential to leach nitrates below the root zone.
  - (d) All soils with systematic subsurface drains (tile) are rated high potential.

**Table 9. Ohio (By County) Leaching Index Ratings for Soils by Hydrologic Groups (A, B, C, D)**

County	A	B	C	D	County	A	B	C	D
Adams	15	10	6	4	Licking	15	8	6	4
Allen	10	6	4	2	Logan	15	8	4	4
Ashland	15	8	4	4	Lorain	15	8	4	2
Ashtabula	15	10	4	4	Lucas	10	6	4	2
Athens	15	10	6	4	Madison	15	8	6	4
Auglaize	10	8	4	2	Mahoning	15	8	4	4
Belmont	15	10	6	4	Marion	15	8	4	4
Brown	15	10	6	4	Median	15	8	4	4
Butler	15	10	6	4	Meigs	15	10	6	4
Carroll	15	8	4	4	Mercer	10	8	4	2
Champaign	15	8	4	4	Miami	15	8	4	4
Clark	15	8	6	4	Monroe	15	10	6	4
Clermont	15	10	6	4	Montgomery	15	10	6	4
Clinton	15	10	6	4	Morgan	15	8	6	4
Columbiana	15	8	4	4	Morrow	15	8	4	4



County	A	B	C	D	County	A	B	C	D
Coshocton	15	8	4	4	Muskingum	15	8	6	4
Crawford	15	8	4	2	Noble	15	8	6	4
Cuyahoga	15	8	4	4	Ottawa	10	6	4	2
Darke	15	8	4	4	Paulding	10	6	4	2
Defiance	10	6	4	2	Perry	15	8	6	4
Delaware	15	8	4	4	Pickaway	15	8	6	4
Erie	10	8	4	2	Pike	15	10	6	4
Fairfield	15	8	6	4	Portage	15	8	4	4
Fayette	15	10	6	4	Preble	15	10	6	4
Franklin	15	8	6	4	Putnam	10	6	4	2
Fulton	10	6	4	2	Richland	15	8	4	4
Gallia	15	10	6	4	Ross	15	10	6	4
Geauga	15	10	4	4	Sandusky	10	6	4	2
Greene	15	10	6	4	Scioto	15	10	6	4
Guernsey	15	8	6	4	Seneca	10	6	4	2
Hamilton	15	10	6	4	Shelby	15	8	4	4
Hancock	10	6	4	2	Stark	15	8	4	4
Hardin	10	8	4	2	Summit	15	8	4	4
Harrison	15	8	6	4	Trumbull	15	8	4	4
Henry	10	6	4	2	Tuscarawas	15	8	4	4
Highland	15	10	6	4	Union	15	8	4	4
Hocking	15	10	6	4	Van Wert	10	6	4	2
Holmes	15	8	4	4	Vinton	15	10	6	4
Huron	10	8	4	2	Warren	15	10	6	4
Jackson	15	10	6	4	Washington	15	10	6	4
Jefferson	15	8	6	4	Wayne	15	8	4	4
Knox	15	8	4	4	Williams	10	6	4	2
Lake	15	10	4	4	Wood	10	6	4	2
Lawrence	15	10	6	4	Wyandot	10	8	4	2

### Calculating Available Nitrogen of Manure<sup>1</sup>

Use the following table to calculate available nitrogen based on time of year and type of application. Determine available nitrogen by multiplying the percent available for ammonia N and organic N and adding them together (i.e.,  $0.5 * \text{NH}_4\text{N} + 0.33 * \text{Organic N}$ ).

Table 10. Available Nitrogen

Manure Applied	Manure Available Nitrogen	Poultry Manure Available Nitrogen	Available Nitrogen %		Time of Application	Days Until Incorporation <sup>2</sup>
Tons	Pounds	Pounds	NH <sub>4</sub>	Organic	Date	Days
			50	33	Nov-Feb	<5
			25	33	Nov-Feb	>3
			50	33	Mar-Apr	<3
			25	33	Mar-Apr	>3
			75	33	Apr-Jun	<1
			25	33	Apr-Jun	>1
			75	15	Jul-Aug	<1
			25	15	Jul-Aug	>1
			25	33	Sep-Oct	<1
			15	33	Sep-Oct	>1

<sup>1</sup>The calculations are for all animal manures. It is assumed that 50% of the organic N in poultry manure is converted to NH<sub>4</sub> rapidly and is therefore included in the NH<sub>4</sub> column for calculating available N.

<sup>2</sup>Incorporation is the mixing of manure and soil in the tillage layer. Disking is usually enough tillage for conserving N availability.

**Table 11. Nutrient Sufficiency Ranges for Corn, Soybeans, Alfalfa and Wheat**

Element	Corn	Soybeans	Alfalfa	Wheat
	Ear leaf sampled at initial silking	Upper fully developed leaf sampled prior to initial flowering	Top 6 inches sampled prior to initial flowering	Upper leaves sampled prior to initial bloom
Percent (%)				
Nitrogen	2.90-3.50	4.25-5.50	3.76-5.50	2.59-4.00
Phosphorus	0.30-0.50	0.30-0.50	0.26-0.70	0.21-0.50
Potassium,	1.91-2.50	2.01-2.50	2.01-3.50	1.51-3.00
Calcium	0.21-1.00	0.36-2.00	1.76-3.00	0.21-1.00
Magnesium	0.16-0.60	0.26-1.00	0.31-1.00	0.16-1.00
Sulfur	0.16-0.50	0.21-0.40	0.31-0.50	0.21-0.40
Parts Per Million (ppm)				
Manganese	20-150	21-100	31-100	16-200
Iron	21-250	51-350	31-250	11-300
Boron	4-25	21-55	31-80	6-40
Copper	6-20	10-30	11-30	6-50
Zinc	20-70	21-50	21-70	21-70
Molybdenum	-	1.0-5.0	1.0-5.0	-

Original Source: M.L. Vitosh (Michigan State University), J.W. Johnson (The Ohio State University), and D.B. Mengel (Purdue University) (1995). Tri-State Fertilizer Recommendations for Corn, Soybeans, Wheat and Alfalfa. Bulletin E-2567. East Lansing Michigan; Michigan State University.

### **Sidedress Nitrogen Fertilizer Rates for Corn, Based on a Presidedress Nitrate Soil Test at the 4 to 6 Leaf Stage**

Instructions: To effectively use the presidedress nitrate soil test, soil samples should be collected when the corn is in the 4 to 6 leaf stage, or 6 to 12 inches tall. Where manure or fertilizer has been broadcast, sampling procedures consist of taking a composite soil sample of 20-25 soil cores at random throughout the sampling area. The cores should be collected to a depth of 12 inches.

**Table 12. Sidedress Nitrogen Fertilizer Rates for Corn**

Soil Nitrate Level	Corn Yield Potential (bu/acre)					
	80	100	120	140	160	180
ppm NO <sub>3</sub> -N	Pounds Additional Fertilizer N To Apply Per Acre					
0-10	80	110	140	160	190	220
11-15	50	80	110	140	160	190
16-20	30	60	90	120	140	170
21-25	0	10	40	60	90	120
>25	0	0	0	0	0	0

**Table 13. Phosphate (P<sub>2</sub>O<sub>5</sub>) Rate for Corn**

Soil Test	Yield Potential (bu/acre)				
	100	120	140	160	180
ppm (lb/acre)	Pounds P <sub>2</sub> O <sub>5</sub> /acre				
5 (10)	85	95	100	110	115
10 (20)	60	70	75	85	90
15-30 (30-60)	35	45	50	60	65
35 (70)	20	20	25	30	35
40 (80)	0	0	0	0	0

Table 14. Phosphate (P<sub>2</sub>O<sub>5</sub>) Rate for Corn Silage

Soil Test	Yield Potential (tons/acre)				
	20	22	24	26	28
ppm (lb/acre)	Pounds P <sub>2</sub> O <sub>5</sub> /acre				
5 (10)	115	125	130	135	140
10 (20)	90	100	105	110	115
15-30 (30-60)	65	75	80	85	90
35 (70)	35	40	40	45	45
40 (80)	0	0	0	0	0

Table 15. Phosphate (P<sub>2</sub>O<sub>5</sub>) Rate for Soybeans

Soil Test	Yield Potential (bu/acre)				
	30	40	50	60	70
ppm (lb/acre)	Pounds P <sub>2</sub> O <sub>5</sub> /acre				
5 (10)	75	80	90	100	105
10 (20)	50	55	65	75	80
15-30 (30-60)	25	30	40	50	55
35 (70)	10	15	25	25	30
40 (80)	0	0	0	0	0

Table 16. Phosphate (P<sub>2</sub>O<sub>5</sub>) Rate for Wheat

Soil Test	Yield Potential (bu/acre)				
	50	60	70	80	90
ppm (lb/acre)	Pounds P <sub>2</sub> O <sub>5</sub> /acre				
5 (10)	80	90	95	100	105
10 (20)	55	65	70	75	80
15-30 (30-60)	30	40	45	50	55
35 (70)	15	20	20	25	30
40 (80)	0	0	0	0	0

Table 17. Phosphate (P<sub>2</sub>O<sub>5</sub>) Rate for Alfalfa

Soil Test	Yield Potential (tons/acre)				
	5	6	7	8	9
ppm (lb/acre)	Pounds P <sub>2</sub> O <sub>5</sub> /acre				
5 (10)	115	130	140	185	165
10 (20)	90	105	115	130	140
15-30 (30-60)	65	80	90	105	115
35 (70)	35	40	45	50	60
40 (80)	0	0	0	0	0

### Phosphorus Index (P Index) Risk Assessment Procedure

The P Index is a procedure that combines well-established factors that influence the runoff of phosphorus to surface waters. Each of the factors is evaluated based on site-specific data and weighted according to its overall effect on phosphorus transport. Each of the site subvalues are added together to establish an overall site rating of low, moderate, high, or very high risk.

In most cases the use of the P Index will allow higher rates of phosphorus application than the Phosphorus Soil Test Risk Assessment Procedure. The use of the P Index should be viewed as a continuous measure until other alternatives can be developed to utilize excess phosphorus produced on the farm.

#### Purpose:

The P Index is a planning tool designed to help identify fields or areas of fields on a farm that have a higher or lower risk of phosphorus runoff from manure or other organic materials. Based on the risk assessment the appropriate land treatment and nutrient application treatments can be planned to minimize phosphorus transport from the site.

#### Procedure:

Use the P Index Assessment Procedure Worksheet to determine the site's overall P Index. Use the following guidance to determine each of the site's subvalues. The subvalues are added together to determine the overall site P Index. The worksheet can be photocopied as needed. A "Field Summary Worksheet" is also available with this procedure to record a series of site/field values for a given farm. It can be photocopied as needed.

1. **SOIL EROSION** – Sheet and rill erosion as measured by the Revised Universal Soil Loss Equation (RUSLE) [USDA-NRCS (2001) National Soil Survey handbook, Section 618.55] or Wind Erosion Prediction Procedure (where wind erosion is the primary concern) [USDA-NRCS (2001) National Soil Survey handbook, Section 618.72]. Determine the predicted soil loss and multiply by (1) to determine the "soil loss" site subvalue.
2. **CONNECTIVITY TO WATER** – Defines the vulnerability of P to be transferred from the site to a perennial stream or water body. The more closely connected the runoff is from the field via concentrated flow (from a defined grassed waterway or surface drain) to a perennial stream or water body the higher the vulnerability of P transport. To determine the "connectivity to water" site subfactor ask the question: Does concentrated flow (via a defined waterway, tile inlet, or surface drain) leave the site? Read the value definitions to determine the site's "connectivity to water" subvalue.
3. **RUNOFF CLASS** – This represents the effect of the Hydrologic Soil Group (A, B, C, D) combined with the effect of slope. This factor represents the site's runoff vulnerability. Use the table below to determine the runoff class. The runoff class is the site's subvalue.

**Table 18. Runoff Class Matrix – Phosphorus Index Values**

Slope Range	Hydrologic Soil Group			
	A	B	C	D
<1%	0	1	3	6
1-3%	1	2	4	7
4-6%	2	3	5	8
7-10%	3	5	7	10
11-15%	4	6	9	12
>15%	6	8	11	15

4. **SOIL "P" TEST (BRAY-KURTZ P1)** – The soil test procedure using the Bray P1 extraction, or other extraction test calibrated to Bray P1, that provides an index of plant available P expressed in either ppm or lbs/acre (ppm x 2 = lbs/acre). Determine the Bray P1 value in ppm and multiply the ppm by (0.07) to determine the soil P test site subvalue.
5. **FERTILIZER P<sub>2</sub>O<sub>5</sub> APPLICATION RATE** – The amount of manufactured (commercial) phosphate fertilizer applied expressed in lbs/acre of P<sub>2</sub>O<sub>5</sub>. To determine the site's subvalue multiply the year's P fertilizer application rate by (0.05).
6. **FERTILIZER P<sub>2</sub>O<sub>5</sub> APPLICATION METHOD** – Defines if the phosphate (P<sub>2</sub>O<sub>5</sub>) fertilizer is actually incorporated into the soil and the time interval between application and incorporation or if the fertilizer is applied over a given amount of crop residue. Incorporation or injection with the fertilizer application equipment or using a tillage tool operated a minimum of 3-4 inches deep to incorporate the P<sub>2</sub>O<sub>5</sub> fertilizer. To determine the site's subvalue select the description that most closely describes the method of application. The value with that description is the site's subvalue.
7. **ORGANIC P<sub>2</sub>O<sub>5</sub> APPLICATION RATE** – The amount of phosphate applied (expressed in lbs/acre of P<sub>2</sub>O<sub>5</sub>) from manure, sludge, or other bio-solids. To determine the site's subvalue multiply the year's P fertilizer application rate by (0.06).
8. **ORGANIC P<sub>2</sub>O<sub>5</sub> APPLICATION METHOD** – Defines if the phosphate (P<sub>2</sub>O<sub>5</sub>) from the manure, sludge, or other bio-solids is actually incorporated into the soil, the time interval between application and incorporation, or if the manure/bio-solids are applied over a given amount of crop residue. Incorporation or injection with the application equipment or by using a tillage tool operated a minimum of 3-4 inches deep to incorporate the manure, sludge, or other bio-solids. To determine the site's subvalue select the description that most closely describes the method of application. The value with that description is the site's subvalue.
9. **BUFFER STRIP** – Deduct 2 points if field runoff flows via sheet flow through a designed filter strip – minimum 35 feet wide. For the type of buffer strip that is limited to the use of filter strips only, it is critical that sheet flow crosses the filter strip, not concentrated flow, to credit a 2 point deduction.

Table 19. Phosphorus Index Risk Assessment Procedure Worksheet

Site Characteristic	Phosphorus Vulnerability Values				
1. Soil Erosion	Soil Loss (tons/acre/year) * 1.0				
2. Connectivity to Water – Does concentrated flow (via a defined waterway, tile inlet, or surface drain) leave the site?	No, and the site is not adjacent to an intermittent or perennial stream. Value = 0	No, but the site is adjacent to an intermittent or perennial stream. Value = 4.0	Yes, but the site is intermittent or perennial. Value = 8.0	Yes, and the site is adjacent to and/or the concentrated flow outlets into an intermittent stream or through a tile inlet. Value = 12.0	Yes, and the site is adjacent to and/or the concentrated flow outlets into a perennial stream or through a tile inlet; OR outlets to a pond or lake within 1 mile. Value = 16.0
3. Runoff Class	See Runoff Class Matrix				
4. Soil Test Bray-Kurtz P1 ppm	Bray-Kurtz P1 (ppm) * (0.07)				
5. Fertilizer P <sub>2</sub> O <sub>5</sub> Application Rate	Fertilizer P <sub>2</sub> O <sub>5</sub> Applied (lbs/acre) * (0.05)				
6. Fertilizer P <sub>2</sub> O <sub>5</sub> Application Method	0 Applied Value = 0	Immediate incorporation OR Applied on 80% cover Value = 0.75	Incorporation <1 week OR Applied on 50-80% cover Value = 1.5	Incorporation >1 week & <3 months OR Applied on 30-49% cover Value = 3.0	No incorporation OR Incorporation >3 months OR Applied on <30% cover Value = 6.0

Site Characteristic	Phosphorus Vulnerability Values				
7. Organic P <sub>2</sub> O <sub>5</sub> Application Rate	Available – Manure/Biosolids P <sub>2</sub> O <sub>5</sub> Applied (lbs/acre) * (0.06)				
8. Organic P <sub>2</sub> O <sub>5</sub> Application Method	0 Applied Value = 0	Immediate incorporation OR Applied on 80% cover Value = 0.5	Incorporation <1 week OR Applied on 50-80% cover Value = 1.0	Incorporation >1 week & <3 months OR Applied on 30-49% cover Value = 2.0	No incorporation OR Incorporation >3 months OR Applied on <30% cover Value = 4.0
Buffer Strip Factor (Deduct 2 points if field runoff flows through a designed filter strip – minimum 35 feet wide)					
TOTAL SITE INDEX VALUE =					
Field Vulnerability for Phosphorus Loss to Surface Water					
Phosphorus Index for Field	Generalized Interpretation of Phosphorus Index & Management				
LOW < 15	LOW potential for P movement from the field. If farming practices are maintained at the current level there is a low probability of an adverse impact to surface waters from P loss. Manure or other biosolids can be applied to meet the recommended nitrogen for the next grass crop or nitrogen removal of the next legume crop.				
MEDIUM 15-30	MEDIUM potential for P movement from the field. The chance of organic material and nutrients getting into surface water exists. Runoff reduction practices such as buffers, setbacks, lower manure/biosolids rates, cover crops, and crop residue practices alone or in combination should be considered to reduce P loss impacts. Manure or other biosolids can be applied to meet the recommended nitrogen for the next grass crop or nitrogen removal of the next legume crop. Applications of P at the crop removal rate should be considered.				
HIGH 31-45	HIGH potential for P movement from the field and for an adverse impact on surface waters unless remedial action is taken. Runoff reduction practices such as buffers, setbacks, lower manure/biosolids rates, cover crops, and crop residue practices alone or in combination should be considered to reduce P loss impacts. Limit application of P to crop removal rates for one year.				
VERY HIGH > 45	VERY HIGH potential for P movement from the field and an adverse impact on surface water. Remedial action is required to reduce the risk of P loss. A complete soil and water conservation system is needed. Apply no additional P.				

### Phosphorus Soil Test Risk Assessment Procedure Nitrogen and Phosphorus Application Criteria for Manure

#### Criteria Application to All Soil Test Levels:

1. Nitrogen application rates from manure shall be based on Total Ammonium Nitrogen content plus 1/3 of the Organic Nitrogen content calculated at time of application when applied during the summer, fall, or winter for spring planted crops. When applied in the spring for spring planted crops the nitrogen application rate can be adjusted to apply the recommended nitrogen within the  $P_2O_5$ ,  $K_2O$ , and other limitations.
2. Nitrogen rates are not to exceed the succeeding crop's recommended Nitrogen for non-legume crops or the Nitrogen removal in the crop's biomass for legume crops.
3. All applications are based on current soil test results (not more than 3 years old).
4. No manufactured  $P_2O_5$  applied above 40 ppm Bray P1 or equivalent test, unless recommended by appropriate industry standards or the land grant universities for specialty crops, vegetable crops, etc.
5. Manure shall be applied in accordance with the restrictions and setbacks in this permit.

Table 20. Phosphorus Soil Test Risk Assessment

"P" Soil Test Level	Application Criteria
Bray P1 < 40 ppm (<80 lbs/acre) OR Other equivalents (e.g., Mehlich 3)	Recommended N or $P_2O_5$ . Manure can be applied to meet the succeeding crop's recommended nitrogen requirements for non-legume crops or the nitrogen removal for legume recommended $P_2O_5$ but not to exceed the nitrogen needs of the succeeding crop.
Bray P1 40-100 ppm (80-200 lbs/acre) OR Other equivalents (e.g., Mehlich 3)	Recommended N or $P_2O_5$ Removal whichever is less. The field shall have >30% ground cover at the time of application or the manure shall be incorporated within one week. The manure can be applied to meet the succeeding crop's recommended nitrogen requirements for non-legume crops or the nitrogen removal for legume crops; or $P_2O_5$ removal (annual or multiple year applications) whichever is less.
Bray P1 100-150 ppm (200-300 lbs/acre) OR Other equivalents (e.g., Mehlich 3)	Recommended N or $P_2O_5$ Removal whichever is less. Manure shall be applied so as not to exceed the succeeding crop's recommended nitrogen requirements for non-legume crops or the nitrogen removal for legume crops. In addition a multiple year application of Phosphorus is not authorized.
Bray P1 > 150 ppm (> 300 lbs/acre) OR Other equivalents (e.g., Mehlich 3)	1. No additional $P_2O_5$ – Use $P_2O_5$ draw-down strategies; or 2. Shall use the Phosphorus Index Risk Assessment Procedure in Part VII, C.



Table 21. Most Limiting Manure Application Rates for Tiled Fields

Select the Most Limiting Application Rate Based on the Following Criteria					
Field Situation & Time of Year	Limiting Application Rate Criteria				
	Nitrogen	P <sub>2</sub> O <sub>5</sub> <sup>4</sup>	K <sub>2</sub> O	Tons/acre Gallons/acre	Available Water Capacity Table
<b>Subsurface Drained (Tiled) Fields</b>					
(Apr-Jun) Subsurface Drained or High N Leaching Potential	<sup>1</sup> Crop needs factoring N losses	Crop needs or crop removal <250 lbs/acre	Crop needs or crop removal <500 lbs/acre	13,000 gal/acre	Upper 8"
(Apr-Jun) Pasture >20% or Cropland >15% Subsurface Drained or High N Leaching Potential	<sup>1</sup> Crop needs factoring N losses	Crop needs or crop removal <250 lbs/acre	Crop needs or crop removal <500 lbs/acre	<sup>5</sup> 10 wet tons, 5,000 gal/acre unless contoured strips or incorporated immediately	Upper 8"
(Jul-Sep) No Growing Crop Subsurface Drained or High N Leaching Potential	<sup>2</sup> 50 lbs/acre as applied N	Crop needs or crop removal <250 lbs/acre	Crop needs or crop removal <500 lbs/acre	13,000 gal/acre	Upper 8"
(Jul-Sep) With a Growing Cover Crop Subsurface Drained or high N Leaching Potential	<sup>3</sup> Next year's crop needs as applied N	Crop needs or crop removal <250 lbs/acre	Crop needs or crop removal <500 lbs/acre	13,000 gal/acre	Upper 8"
(Jul-Sep) No Growing Crop, Cropland >15% Subsurface Drained or High N Leaching Potential	<sup>2</sup> 50 lbs/acre as applied N	Crop needs or crop removal <250 lbs/acre	Crop needs or crop removal <500 lbs/acre	13,000 gal/acre	Upper 8"
(Oct-Mar) Subsurface drained or High N Leaching Potential	<sup>3</sup> Next year's crop needs as applied N	Crop needs or crop removal <250 lbs/acre	Crop needs or crop removal <500 lbs/acre	13,000 gal/acre	Upper 8"
(Oct-Mar) Pasture >20% or Cropland >15% Subsurface Drained or High N Leaching Potential	<sup>3</sup> Next year's crop needs as applied N	Crop needs or crop removal <250 lbs/acre	Crop needs or crop removal <500 lbs/acre	<sup>5</sup> 10 wet tons, 5,000 gal/acre – unless contoured strips or incorporated immediately	Upper 8"
Frozen or Snow-Cover Subsurface Drained or High N Leaching Potential	<sup>3</sup> Next year's crop needs as applied N	Crop needs or crop removal <250 lbs/acre	Crop needs or crop removal < 500 lbs/acre	<sup>5</sup> 10 wet tons < 50% solids, 5 wet tons > 50% solids, liquid manure 5,000 gal/acre	
<sup>1</sup> Crop needs factoring N losses – Maximum total nitrogen applied to meet the succeeding crop's recommended nitrogen requirements for non-legume crops or 150 lbs/acre nitrogen for the succeeding legume crop. Considers loss of N through application method and time of year.					
<sup>2</sup> 50 lbs/acre as applied N – Nitrogen application limited to 50 lbs/acre based in the addition of the NH <sub>4</sub> (ammonium/ammonia) content of the manure + 1/3 of the organic nitrogen content of the manure as applied. Considers no losses due to application method or time of year.					
<sup>3</sup> Next year's crop needs as applied N – Maximum total nitrogen applied to meet the succeeding crop's recommended nitrogen requirements for non-legume crops or 150 lbs/acre nitrogen for the succeeding legume crop. Considers no losses due to application method or time of year.					
<sup>4</sup> Under special conditions and criteria the rate of P <sub>2</sub> O <sub>5</sub> application can be increased to 500 lbs/acre (See Part VII, A, 4, h, (3), iii). Frozen or snow-covered ground and field over 100 ppm Bray P1 soil test are exempt and are always limited to applications less than or equal to 250 lbs/acre P <sub>2</sub> O <sub>5</sub> .					
<sup>5</sup> Wet tons refers to the weight of the manure as it is applied – including solids and moisture weight.					

Table 22. Most Limiting Manure Application Rates for Non-Tiled Fields

Select the Most Limiting Application Rate Based on the Following Criteria					
Field Situation & Time of Year	Limiting Application Rate Criteria				
	Nitrogen	P <sub>2</sub> O <sub>5</sub> <sup>4</sup>	K <sub>2</sub> O	Tons/acre Gallons/acre	Available Water Capacity Table
<b>Non Subsurface Drained (Tiled) Fields</b>					
(Apr-Jun) Not Subsurface Drained Pasture >20% or Cropland >15%	<sup>1</sup> Crop needs factoring N losses	Crop needs or crop removal <250 lbs/acre	Crop needs or crop removal <500 lbs/acre	<sup>5</sup> 10 wet tons, 5,000 gal/acre unless contoured strips or incorporated immediately	Upper 8"
(Jul-Sep) Not Subsurface Drained	<sup>1</sup> Crop needs factoring N losses	Crop needs or crop removal <250 lbs/acre	Crop needs or crop removal <500 lbs/acre		Upper 8"
(Jul-Sep) Not Subsurface Drained Pasture >20% or Cropland >15%	<sup>1</sup> Crop needs factoring N losses	Crop needs or crop removal <250 lbs/acre	Crop needs or crop removal <500 lbs/acre		Upper 8"
(Oct-Mar) Not Subsurface Drained	<sup>1</sup> Crop needs factoring N losses	Crop needs or crop removal <250 lbs/acre	Crop needs or crop removal <500 lbs/acre		Upper 8"
(Oct-Mar) Not Subsurface Drained Pasture >20% or Cropland >15%	<sup>1</sup> Crop needs factoring N losses	Crop needs or crop removal <250 lbs/acre	Crop needs or crop removal <500 lbs/acre	<sup>5</sup> 10 wet tons, 5,000 gal/acre – unless contoured strips or incorporated immediately	Upper 8"
Frozen or Snow-Cover Not Subsurface Drained	<sup>1</sup> Next year's crop needs factoring N losses	Crop needs or crop removal <250 lbs/acre	Crop needs or crop removal < 500 lbs/acre	<sup>5</sup> 10 wet tons < 50% solids, 5 wet tons > 50% solids, liquid manure 5,000 gal/acre	
<sup>1</sup> Crop needs factoring N losses – Maximum total nitrogen applied to meet the succeeding crop's recommended nitrogen requirements for non-legume crops or 150 lbs/acre nitrogen for the succeeding legume crop. Considers loss of N through application method and time of year.					
<sup>4</sup> Under special conditions and criteria the rate of P <sub>2</sub> O <sub>5</sub> application can be increased to 500 lbs/acre (See Part VII, A, 4, h, (3), iii). Frozen or snow-covered ground and field over 100 ppm Bray P1 soil test are exempt and are always limited to applications less than or equal to 250 lbs/acre P <sub>2</sub> O <sub>5</sub> .					
<sup>5</sup> Wet tons refers to the weight of the manure as it is applied – including solids and moisture weight.					

## Wilson, Rick

---

**From:** Wilson, Rick  
**Sent:** Tuesday, August 30, 2016 12:51 PM  
**To:** Monroe, Christopher  
**Subject:** FW: **Exemption 6** Dairy inspection

FYI.

If you want to look through a Permit. There is a link provided below.

**From:** **Exemption 6** [mailto:**Exemption 6**]  
**Sent:** Friday, August 19, 2016 11:43 AM  
**To:** Wilson, Rick <Rick.Wilson@epa.ohio.gov>  
**Subject:** RE: **Exemption 6** Dairy inspection

Sounds good

**Exemption 6**

On Aug 19, 2016 8:17 AM, "[Rick.Wilson@epa.ohio.gov](mailto:Rick.Wilson@epa.ohio.gov)" <[Rick.Wilson@epa.ohio.gov](mailto:Rick.Wilson@epa.ohio.gov)> wrote:

**Exemption 6**:

We can accommodate the August 31, 2016 inspection date you proposed.

The purpose of the site-visit/inspection is described below in this e-mail thread below. I will be joined by Mr. Dan Bruner, Inspector with the Ohio Department of Agriculture-Division of Livestock Environmental Permitting. (ODA-DLEP).

We plan to arrive Wednesday August 31, 2016 at 10:00 a.m. +/-, and plan to meet with you for approximately 1 to 1.5 hours.

*Re Biosecurity:*

*This will be the only livestock facility I visit during the week of Aug. 29. Further, both Dan Bruner and I will wear disposable rubber boots upon arrival. Please advise us of any additional biosecurity protocols that are in place.*

Please confirm this date and time. Thank you.

~rick

**Rick Wilson, Environmental Specialist**

**Ohio EPA | Division of Surface Water**

**Surface Water Improvement and Nonpoint Source-§319 program**

P.O. Box 1049, Columbus, OH 43216-1049

Ph: 614-644-2032

Fax: 614-644-2745

[rick.wilson@epa.ohio.gov](mailto:rick.wilson@epa.ohio.gov)



**From:** Exemption 6 [mailto:Exemption 6]  
**Sent:** Friday, August 19, 2016 9:04 AM  
**To:** Wilson, Rick <[Rick.Wilson@epa.ohio.gov](mailto:Rick.Wilson@epa.ohio.gov)>  
**Cc:** Exemption 6 Dairy <Exemption 6>  
**Subject:** RE: Exemption 6 Dairy inspection

Rick

Sorry about the delay getting back to you, I just got back from our family camping trip and had trouble booking with Delta.

I'm flying out on the 27<sup>th</sup> would be available on the 31<sup>st</sup>, if that doesn't work, I understand.

Anyways.....

Manager is Exemption 6Exemption 6

Exemption 6

Exemption 6 Weston Ohio 43569

Thanks

Exemption 6

Exemption 6 Land Company LLC

Exemption 6

Klamath Falls Oregon

79603

Exemption 6

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**From:** [Rick.Wilson@epa.ohio.gov](mailto:Rick.Wilson@epa.ohio.gov) [mailto:[Rick.Wilson@epa.ohio.gov](mailto:Rick.Wilson@epa.ohio.gov)]

**Sent:** Tuesday, August 09, 2016 11:51 AM

Exemption 6

**Cc:** [Daniel.Bruner@agri.ohio.gov](mailto:Daniel.Bruner@agri.ohio.gov); [Kevin.Elder@Agri.ohio.gov](mailto:Kevin.Elder@Agri.ohio.gov); [Erin.Sherer@epa.ohio.gov](mailto:Erin.Sherer@epa.ohio.gov)

**Subject:** Exemption 6 Dairy inspection

Exemption 6

We talked today about the Exemption 6 Dairy facility in Ohio, and that I need to follow up with an inspection, to determine the current status of the facility's operation and manure management, compliance with now expired NPDES, and determine next steps in permitting at this facility (either No Permit required, or permit needs renewed).

You indicated you plan to visit this facility in the coming week/weeks. If that is still the case, and you want to be present when I visit, please let me know at your earliest convenience what days you will be available

**I also need to the name and contact information for the current facility manager.** Please responds with that information.

I am tasked by Ohio EPA-Division of Surface Water management to visit this dairy as soon as possible and not later than Friday, August 26. I was hoping to get out to the facility no later than next Wednesday (August 17, 2016).

I have also cc'd the Ohio Department of Agriculture-Division of Livestock Environmental Permitting (Dan Bruner-Inspector, and Kevin Elder, Chief) with this message, and also Ohio EPA's Surface Water Permits program manager Erin Sherer.

You mentioned there are currently approximately [redacted] cows being milked at the [redacted] facility and some # of replacement heifers. You also indicated you would probably like to expand the herd there (and wonder how that process would need to go). I tried to explain to you the nuances of the State program for Confined Animal Feeding Facilities (CAFF's) and Ohio EPA's Federally enforceable permitting program for Concentrated Animal Feeding Operations (CAFOs), but it might be easier in person.

**!!!!The now-expired NPDES permit for [redacted] Dairy is located here!!!!:**

[http://epa.ohio.gov/portals/35/cafo/2IK00023\\_BD.pdf](http://epa.ohio.gov/portals/35/cafo/2IK00023_BD.pdf)

You should review this document.

More general CAFO information is found here.

<http://www.epa.state.oh.us/dsw/cafo/index.aspx>

As mentioned to you by phone, unless the permit is removed from our books (through an NPR action), the conditions remain effective. One key element of the permit (linked above) that is relevant to the purpose of our requested meeting/inspection is Item N on page 20:

**N. In the event that this facility is closed for production purposes or is no longer a CAFO, this permit shall remain effective until the permittee demonstrates to the satisfaction of the Director that there is no remaining potential for a discharge of manure that was generated while the operation was a CAFO, other than agricultural storm water from land application areas. All manure shall be properly disposed of, and in the case of facility closure, the manure storage or treatment facilities shall be properly closed.**

Please let me know as soon as possible the name and contact info of the facility manager at **Exemption 6** and whether you will be available in the very short term to join me at the facility.

Thank you

~rick

Rick Wilson, Environmental Specialist

Ohio EPA-Division of Surface Water

50 W. Town St.

Columbus, OH

614-644-2032



## Wilson, Rick

---

**From:** Wilson, Rick  
**Sent:** Tuesday, August 09, 2016 8:46 AM  
**To:** Elder, Kevin  
**Cc:** Sherer, Erin; Harris, Melinda  
**Subject:** NPDES program info and request to jointly schedule/inspect facilities

Good morning Kevin:

Thanks for helping with the **Exemption 6** Land Company contact info.

Also, I'm told by program manager Erin Sherer that we are bringing in a new employee who will be assigned 0.25 FTE to CAFO program. And another person in our PTI/NPDES program is taking on 0.25 FTE duties. There will be some training of these new folks (permit writing) and some exposure to farms and inspections.

Also: I'm hoping we can work with your inspectors as they begin to schedule their next round of inspections at the following facilities. (We have some on our list that we need to get done).

Facilities that **OEPA needs to join ODA for their next inspection:**

**Exemption 6** Farms-All facilities

**Exemption 6** Dairy

**Exemption 6** Dairy

**Exemption 6** Dairy

**Exemption 6** Poultry

**Exemption 6** Mad River

**Exemption 6** Farm 3

**Exemption 6** /Rising Sun Dairy

**Exemption 6** Partnership (Defiance County)

To address Verified Complaint from Wood County Citizen

**Exemption 6** Dairy **Exemption 6** Land Company.....D. Bruner told me he would join me if you agree...(need to set that up ASAP)

If ODA-DLEP is interested

**Exemption 6** Pork-Pickaway County Medium (**Exemption 6** sows) with pending NPDES permit...and no MMP provided. (considering enforcement, due to non-response)

**Exemption 6** Medium CAFO

Thanks Kevin!

~rick

## Wilson, Rick

---

**From:** Wilson, Rick  
**Sent:** Tuesday, October 20, 2015 10:09 AM  
**To:** Schuch, Brittany; Alexander, Cathy  
**Subject:** RE: Exemption 6 Land Company LLC MMP

Not to my knowledge.

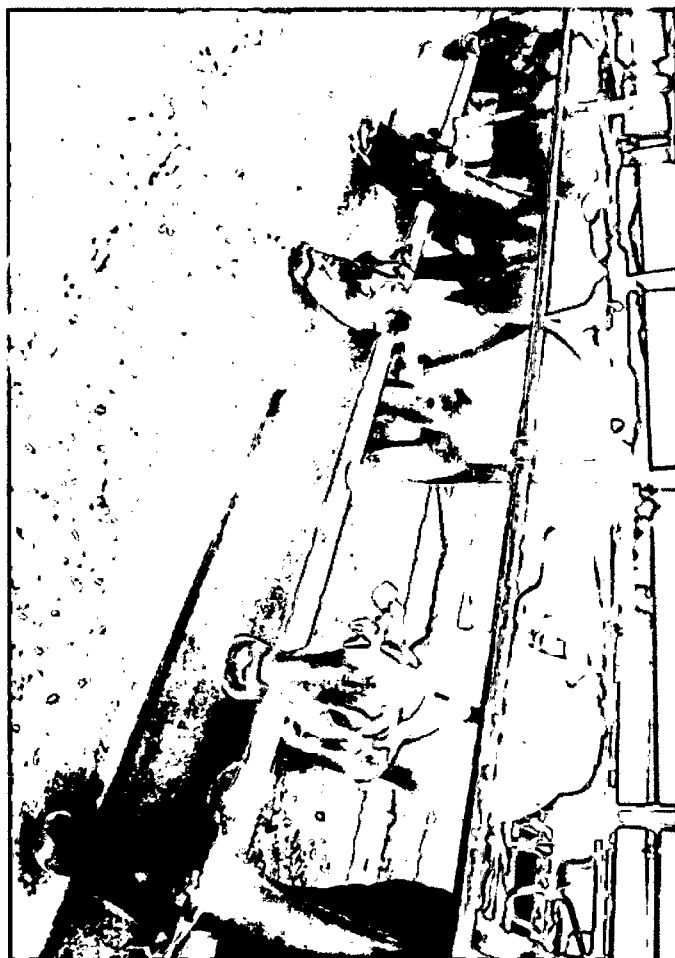
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**From:** Schuch, Brittany  
**Sent:** Wednesday, October 14, 2015 7:51 AM  
**To:** Wilson, Rick; Alexander, Cathy  
**Subject:** Exemption 6 Land Company LLC MMP

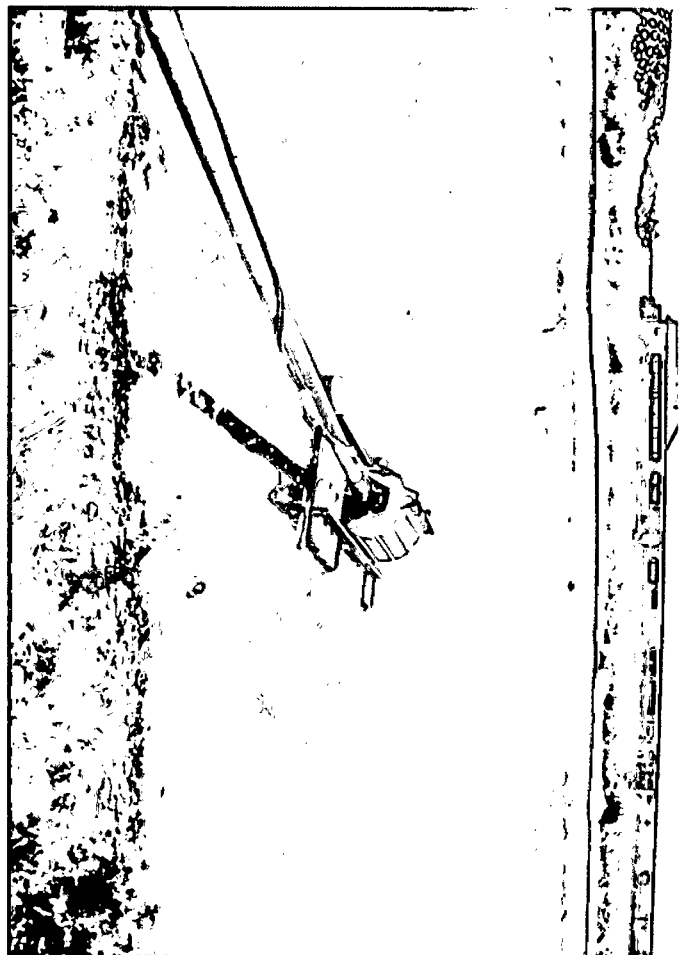
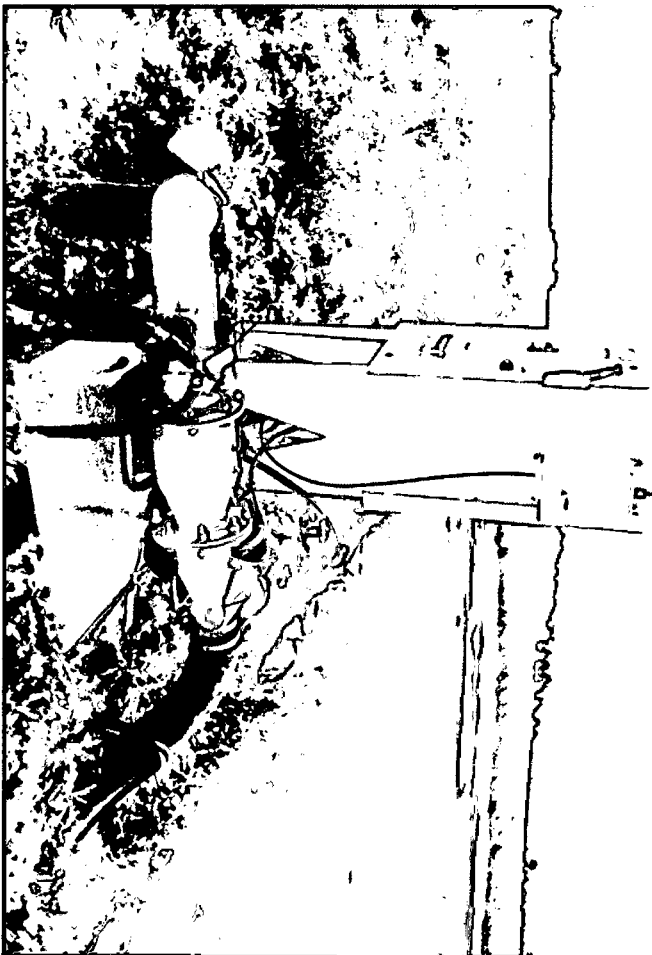
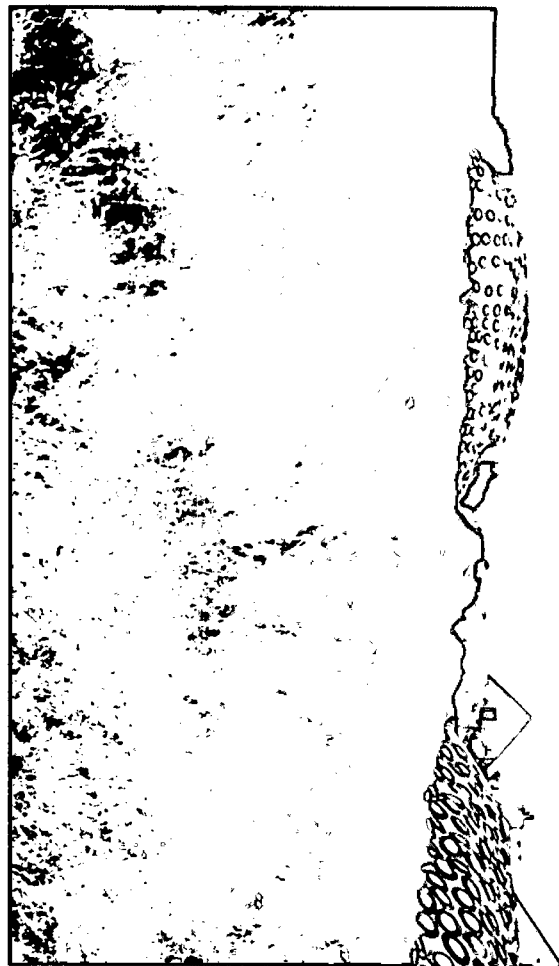
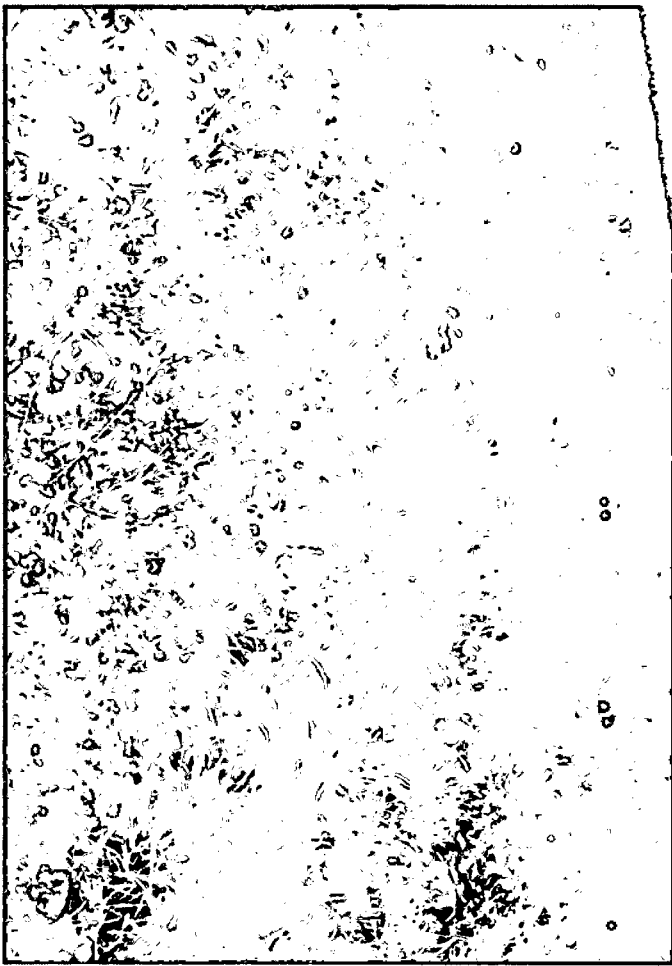
We are attempting to wrap up our Dairy Acquisitions 1 LLC enforcement case. According to the permit record for 2IK00023, the CAFO NPDES permit transferred to Exemption 6 Land Company LLC on 9/2014. Has this company submitted a MMP to Central Office?

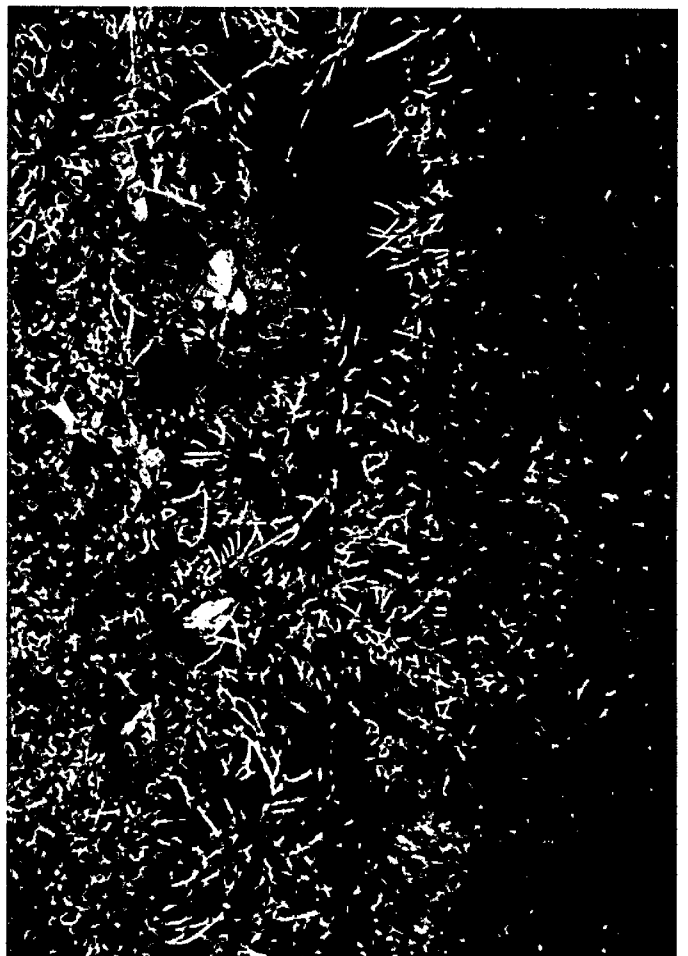
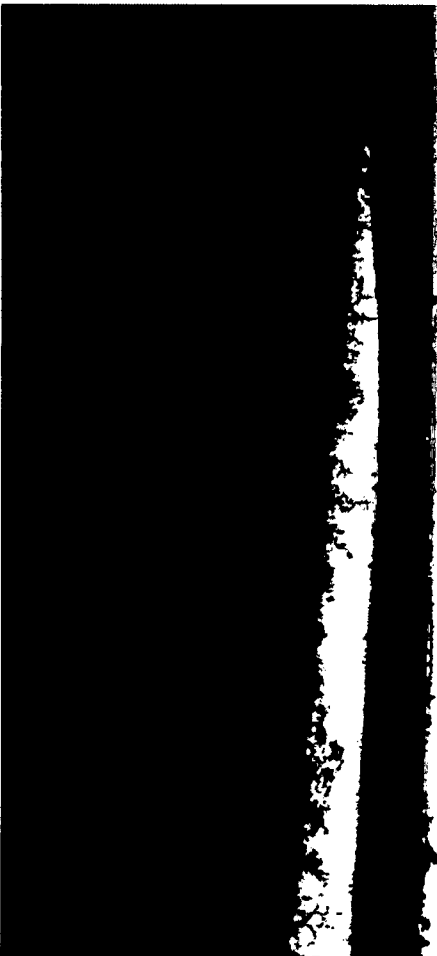
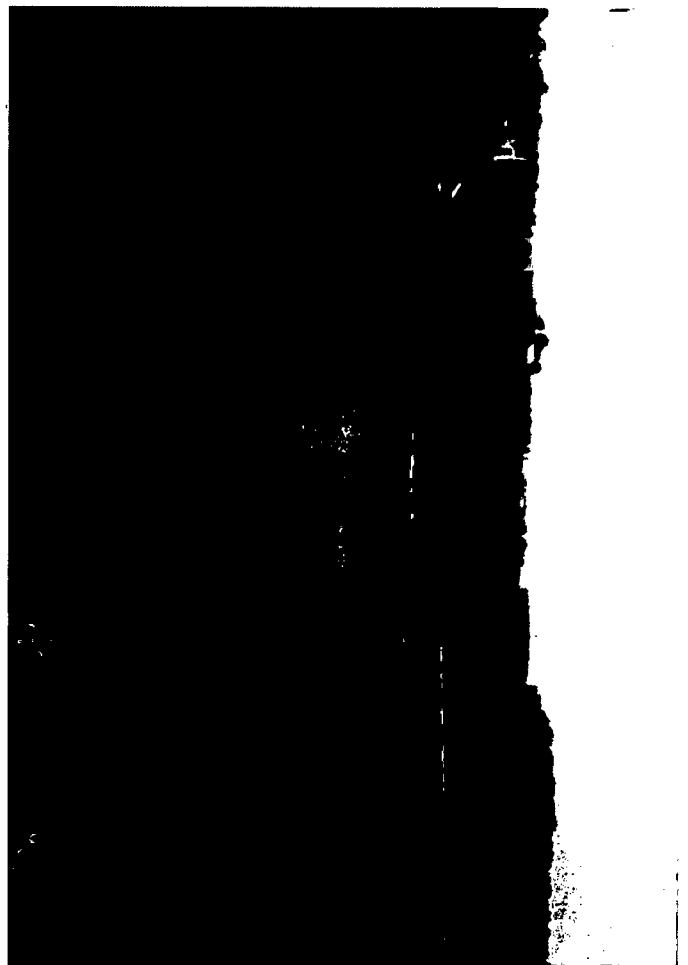
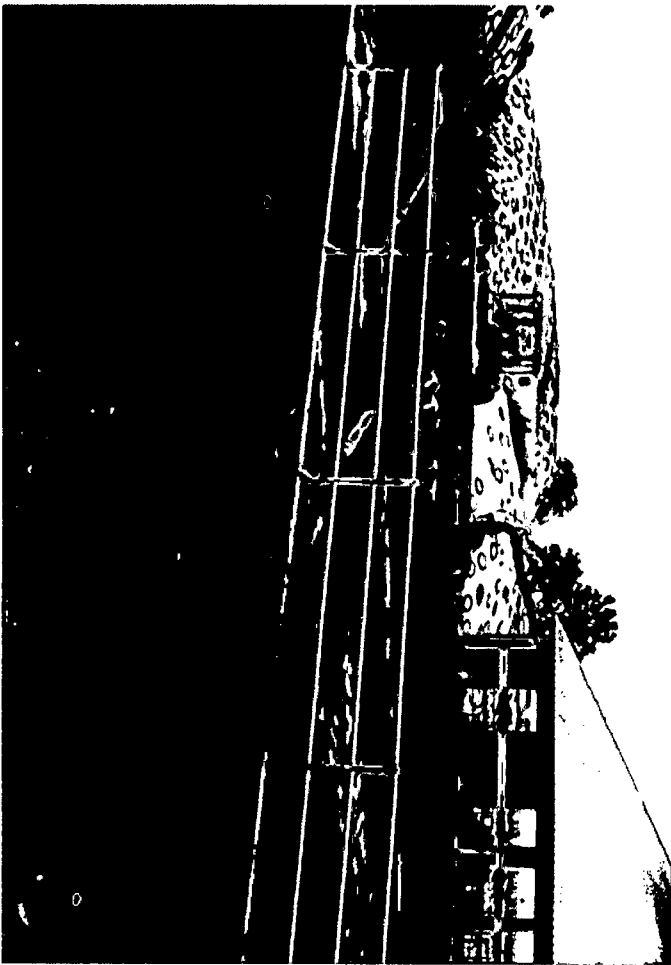
I am not sure who would have this information since Hunter left, but I am starting with you two.

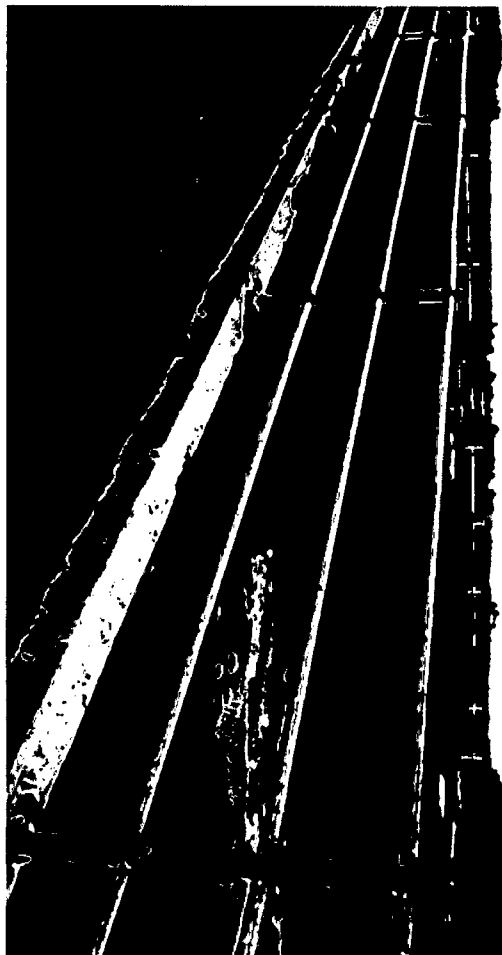
Let me know,  
Brittany Schuch



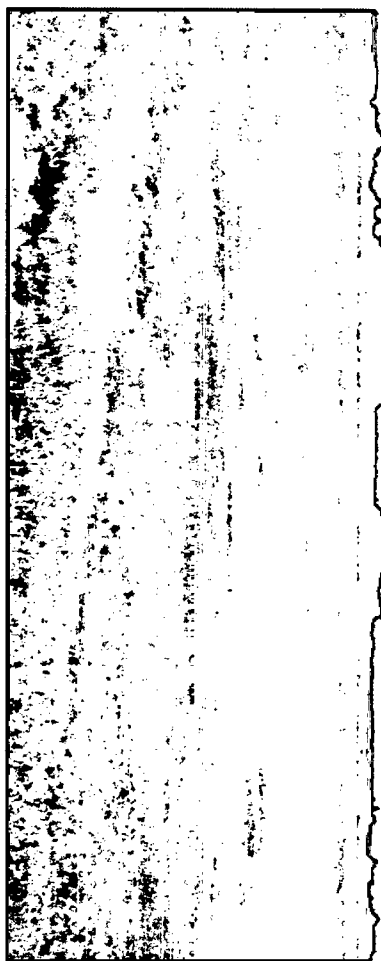
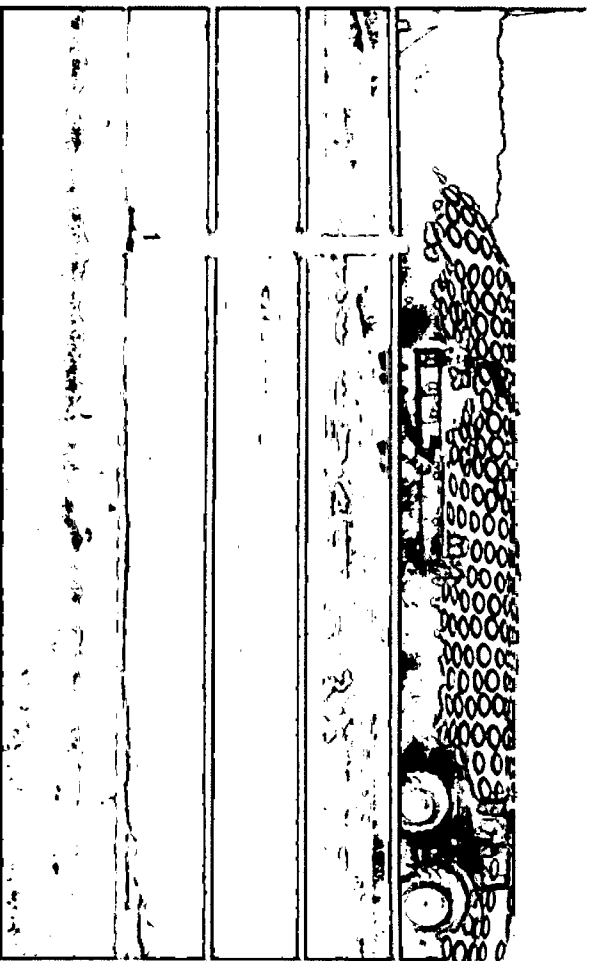
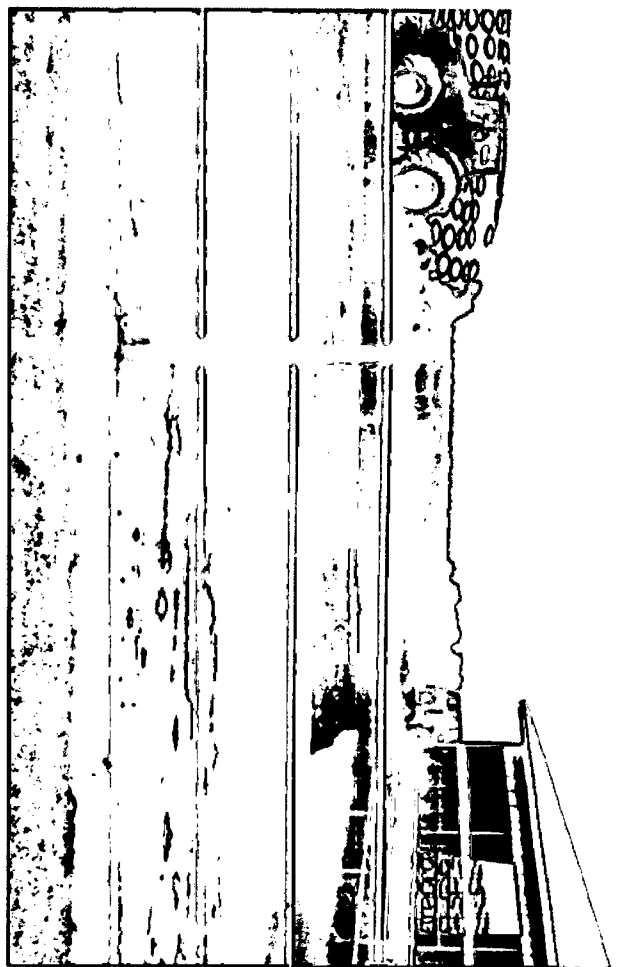


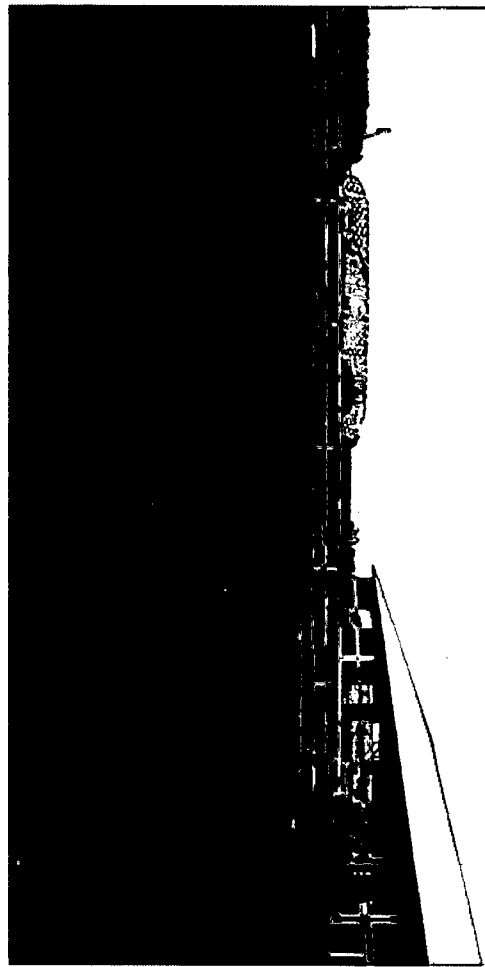






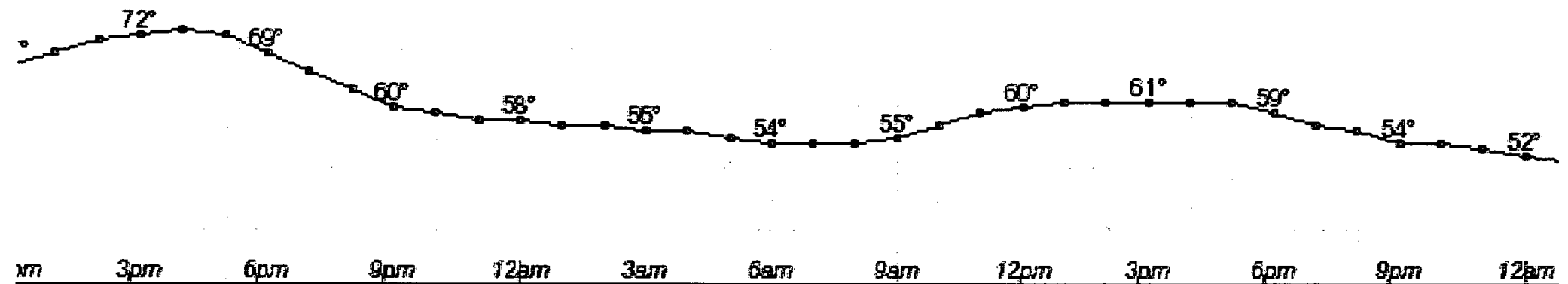






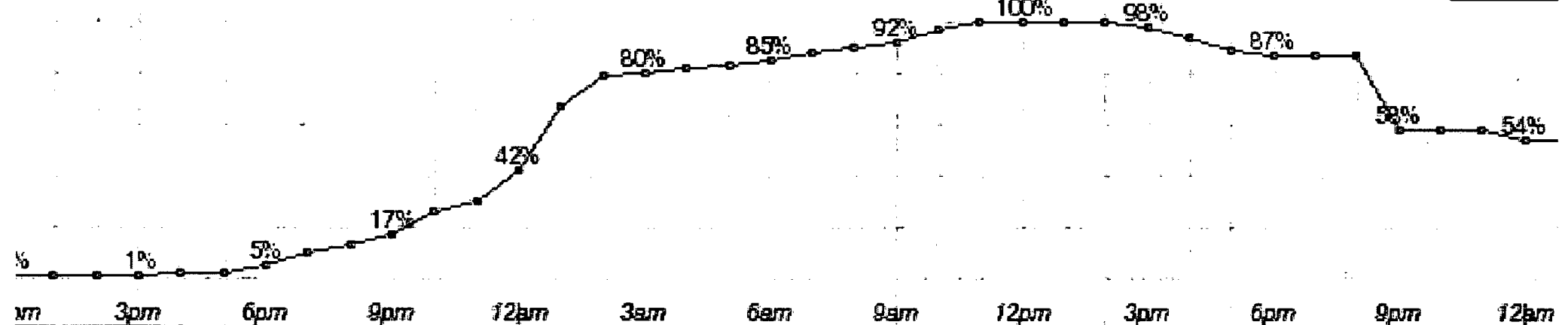
Thu, Oct 20 2016

Fri



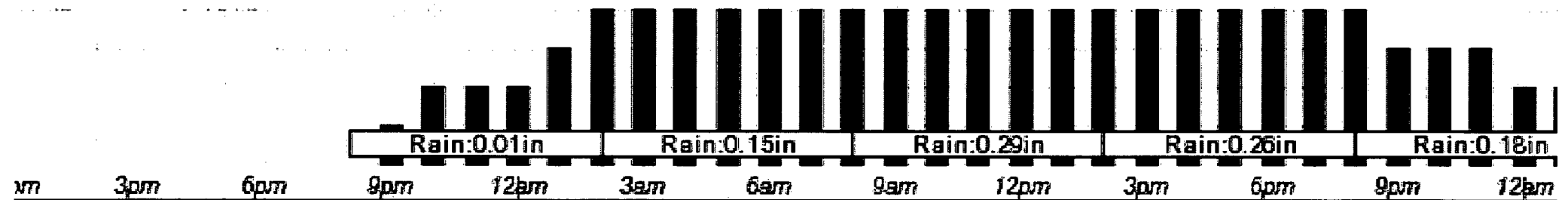
Thu, Oct 20 2016

Precip



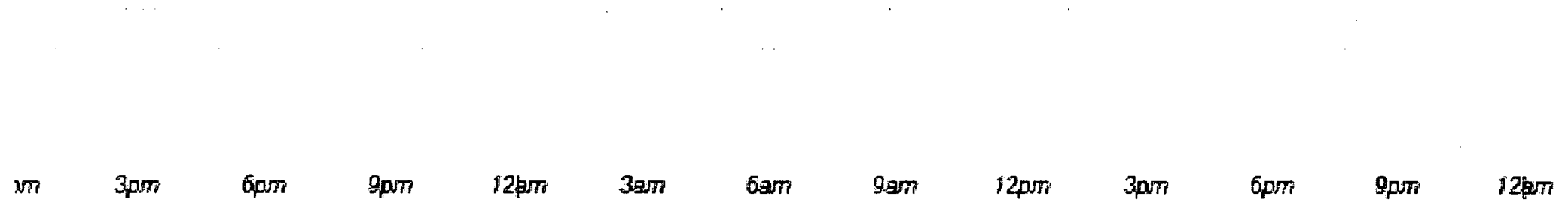
Thu, Oct 20 2016

Fri



Thu, Oct 20 2016

Fri



Dewpoint 51°F (11°C)  
Visibility 0.75 mi  
Last update 19 Oct 6:53 am EDT


#### More Information:

[Local Forecast Office](#)[More Local Wx](#)[3 Day History](#)[Mobile Weather](#)[Hourly Weather Forecast](#)

#### Extended Forecast for

## Portage OH

- Today

 Today: Sunny, with a high near 73. Calm wind becoming northeast around 5 mph in the afternoon.

Sunny

High: 73 °F

- Tonight




30% → 80%

Chance  
Showers then  
Showers

Low: 54 °F

- Thursday

 Thursday: Showers. High near 61. North wind 7 to 13 mph. Chance of precipitation is 100%. New precipitation amounts between a quarter and half of an inch possible.

ty: Showers. High near 61. North wind 7 to 13 mph. Chance of precipitation is 100%. New precipitation amounts between  
an inch possible.

0%

ten

A chance of showers, mainly before 7am. Partly sunny, with a high near 53. Northwest wind 13 to 16 mph. Chance of prec  
ew precipitation amounts of less than a tenth of an inch possible.

oudy

y: Mostly sunny, with a high near 53.

unny